

**PRINCIPALS' ADOPTION OF ABSTINENCE-ONLY-UNTIL-MARRIAGE
EDUCATION AS AN INNOVATION IN TEXAS PUBLIC MIDDLE SCHOOLS**

A Dissertation

by

KELLY LYNN WILSON

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2004

Major Subject: Health Education

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May 2004

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ABSTRACT

Principals' Adoption of Abstinence-Only-Until-Marriage Education as an Innovation in Texas

Public Middle Schools.

(May 2004)

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This study assessed indicators of adoption of abstinence-only-until-marriage education as an innovation by middle school principals in the state of Texas. It also assessed school principals' likelihood of adopting such programs. This study was conducted in the context of changing school policies related to sexuality education and an influx of governmental funding intended to encourage instruction about abstinence-only-until-marriage. The impact of school-based, abstinence education and the role of the principal are of special interest for those promoting healthy sexual behavior among youth.

The study's sample consisted of 433 responses from a proportional random sample of middle school principals selected from 20 Education Service Center Regions in the state of Texas. Rogers' Diffusion of Innovations Theory provided the theoretical framework and foundation for this research. Five perceived attributions of an innovation—relative advantage, compatibility, complexity, trialability and observability—were the study's independent variables. The dependent variable was defined as the likelihood of principals adopting abstinence-only-until-marriage education in their schools. Location of schools (i.e., in rural or urban counties), was examined as having a possible moderating effect on other variables.

Findings from this study indicated the middle school principal who was most willing to adopt abstinence-only-until-marriage education programs into his or her school's curriculum strongly believed abstinence education provided important advantages for youth, and strongly perceived abstinence-only-until-marriage education to be consistent with his or her professional and personal beliefs and values. The average principal also did not perceive abstinence-only-until-marriage education to be complex. The typical respondent agreed that elements of abstinence-only-until-marriage education could be easily tried in the school, and considered it important to observe other principals adopting abstinence-only-until-marriage education prior to adopting the innovation. Trialability, complexity and religion were the strongest predictors for likelihood of adoption.

Efforts to promote abstinence-only-until-marriage education in the public schools are dependent upon an understanding of the role of administrators in the curriculum adoption process. This study contributes to the knowledge base related to the school principal's influence on abstinence promoting programs.

DEDICATION

This dissertation is dedicated to my goddaughter

Margaret “Maggie” Katherine Schuler.

An Irish Blessing

May you always have work
For your hands to do.
May your pockets hold,
Always a coin or two.

May the sun shine bright,
On your window pane.
May the rainbow be certain,
To follow each rain.

May the hand of a friend,
always be near you.
And may God fill your heart,
With gladness to cheer you.

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I parallel the unique challenge of writing a dissertation to the tribulation of running a marathon. Where running a marathon may require body and spirit, the dissertation necessitates mind and spirit. Both are most successfully completed in an atmosphere of nurture and support, but in both scenarios, *training is everything*. Individuals who have nurtured, supported or trained me provided the knowledge and strength to move forward in this “marathon endeavor.”

I greatly appreciate the support of those I consider my mentors. They gave me the knowledge and strength that I needed to push ahead. First to my committee chair, Dr. B.E. Pruitt, you were the finish line. You have been a friend and mentor since 1998, your encouragement and effort paved the path for personal and professional growth. You are my “coach” and my gratitude to you is deep and abiding. To Dr. Patricia Goodson, a major advisor and committee member, your expertise and invaluable guidance provided me the assurance I needed to complete my research. You took me from mile 26 to mile 26.2. To Dr. Steve Dorman, my committee member who provided feedback and advice to keep me focused. To Dr. Michael Ash, your support of my efforts is greatly appreciated.

Aside from my mentors, I am in deep gratitude to my support crew. To Emily Davis, a friend who deserves to win first place. I am indebted to you for your endless assistance and friendship. To my parents Linda and Kevin Wilson whose unwavering love cannot be expressed in words. To my grandparents, Mr. and Mrs. Joseph Lukaszewski and Mr. William Wilson, your pride and family values have taught me so much. To my sisters, Rebecca and Jammie, without you, I wouldn’t know how to put up a fight! To the Schuler family and all other friends who have put in the extra mile for me, I am crossing this finish line with you.

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CHAPTER I

INTRODUCTION

Abstinence-only-until-marriage programs represent approaches that vary in their length, components, activities and messages conveyed (National Campaign to Prevent Teen Pregnancy, 1998). According to the Abstinence Clearinghouse, a center for abstinence resources, abstinence-only-until-marriage refers to “programs that promote abstinence-until-marriage as the expected standard of behavior in a directive manner.” Abstinence programs provide students with information on building healthy relationships, levels of intimacy, the benefits of abstinence and the consequences of premarital sexual behavior (Abstinence Clearinghouse, 2001). The number of U.S. schools implementing the abstinence education message in their campus-based curricula is growing. The attention given to abstinence education in schools increased during the 1990s, with much of this growth related to federal and state funding (Darroch, Landry, Singh, 2000; National Campaign to Prevent Teen Pregnancy, 1998).

One of the factors influencing adoption of abstinence education programs by local schools is support of school administrators, particularly principals. Principal support is critical in establishing priorities and committing to programs implemented in schools (Albert, Brown & Flanigan, 2003; Resnick, et al., 1997). Little is known about principals’ influence and support for abstinence-only-until-marriage programs; therefore, research is needed to help educators appreciate and understand the influence of administrators’ adoption of abstinence education.

The purpose of this study was to assess indicators of adoption of abstinence-only-until-marriage education as an innovation by middle school principals in the state of Texas. This study also assessed school principals’ likelihood of adopting such programs. The Diffusion of Innovation theory provided a theoretical framework for the study. The research design utilized a survey that

This dissertation follows the style and format of the *American Journal of Health Education*.

measured middle school principals' perceptions of the attributes of abstinence-only-until-marriage education.

Significance of Problem

One challenge facing U.S. public schools today is governance of adolescent behaviors. Educators are expected to take the first step in establishing practices to enhance protective factors for youth and to reduce their risk for unwanted outcomes (Resnick, et al., 1997). This challenge is especially formidable when it relates to sexual behavior of students. Schools often address adolescent pregnancy prevention and prevention of sexually transmitted infections/sexually transmitted diseases (STIs/STDs) through school-based or community-linked sexuality education and support programs (Greene, 1998).

Most public schools in the United States teach some form of sexuality education, and virtually all public school students have been exposed to sexuality education by the time they graduate from high school (Darroch, Landry & Singh, 2000). Sexuality education classes tend to focus on the biological, emotional, and practical issues that provide students with a broad range of knowledge crucial to their personal development and future sexual health (Lindberg, Ku & Sonenstein, 2000). School curricula also may cover contraceptive methods (Albert, Brown & Flanigan, 2003). In addition, some schools implement programs to address health issues such as adolescent pregnancy, HIV infection and other STIs/STDs (Greene, 1998). Educators may focus on youth acquiring effective communication, coping and decision-making skills to prevent risky behaviors (Matthews & Menna, 2003). However, not all schools adequately cover sex-related topics, and, further, the extent to which these educational initiatives reduce risk is not clear (Albert, Brown & Flanigan, 2003).

Historically, the controversy surrounding sexuality education focused on whether schools should be conducting such activities at all. More recently, however, the controversy is not over

whether or not to teach sexuality education, but rather what kind of sexuality education to teach (McKay, 1999; Young & Goldfarb, 2000). Abstinence-only-until-marriage programs, abstinence-based education, comprehensive sexuality education and youth development activities offer a variety of sexuality education programs. (Darroch, Landry & Singh, 2000). Furthermore, the controversy over which type of sexuality education program to teach is compounded by the fact that school administrators may refrain from expressing their opinions related to beliefs and practices about sexuality education (Wilson, 2000).

Abstinence-only-until-marriage education is a relatively new form of sexuality education that became especially popular with the dispersion of monies from the Welfare Reform Act of 1996 (Young & Goldfarb, 2000). There is controversy over the notion of teaching sexual abstinence (Young & Goldfarb, 2000). Some health educators do not support abstinence education programs and they identify a variety of reasons for this non-support. Some health educators suggest few rigorous evaluations of existing abstinence education programs have been conducted to indicate abstinence programs delay the onset of sexual intercourse. Others suggest evaluations have not concluded whether the abstinence-only program model is effective or not (National Campaign to Prevent Teen Pregnancy, 1998). Some professionals also discredit abstinence education because they feel it withholds appropriate and potentially life-saving information from school-aged youth (Kempner, 2001; Human Rights Watch, 2002).

Despite their risk-reduction motives, sexuality education teachers feel unsupported by community, parents and school administrators (Landry, Singh & Darroch, 2000). Recent research suggests teachers believe schools administrators are nervous about community reaction to sexuality education (Wilson, 2000). Some teachers also feel that sexuality education programs do not meet students' informational needs. Many believe sexuality education should be introduced earlier and with age-appropriate topics (Wilson, 2000; Landry, Singh & Darroch, 2000).

The lack of professional training of instructors also harms the reputation of abstinence-only programs. Most instructors of abstinence-only education are teachers of biology, physical education, family or consumer science and health education (Darroch, Landry & Singh, 2000; Wilson, Pruitt, Goodson & Suther, 2003). Few have taken a course in sexuality education or child/adolescent development issues; and fewer still have received certification as sexuality educators. Lack of training, therefore, can lead to instruction from ideological perspectives or agendas rather than from scientific evidence (Rodriguez, 2000).

Two federal programs instituted by the Welfare Reform Act of 1996 funded abstinence education to advocate abstinence as the social norm for school-age children (Thomas, 2000). Funds were provided through the Adolescent Family Life Provision under Title XX and through a block grant. Congress committed to distributing \$250 million over a five-year period to support educational programs that exclusively promoted abstinence outside of marriage. Programs funded under this initiative were expected to support marriage as the standard for sexual activity and were expected to adopt the (a)-(h) definition of abstinence education (see Table 1). The Bureau of Maternal and Child Health, the federal agency responsible for distributing and monitoring abstinence education funds, indicated that although programs did not have to meet all eight aspects of the definition, they could not be inconsistent with any aspect of the definition (Young & Goldfarb, 2000).

Funds for abstinence-only-until-marriage programs were also available through the Social Services Block Grant (Welfare Reform Law, 1996), a general block grant program states could use to fund a wide variety of social service programs. Services funded through the program included adoption, day care, employment services, family planning, housing, and transportation. The transfer provisions of the welfare reform law also required states to spend these funds on services for children or their families whose income was at 200 percent of the federal poverty level or lower (Human Rights Watch, 2002).

Table 1. Title V Definition of "Abstinence Education"

"Abstinence education" means an educational or motivational program which—

- (A) has as its exclusive purpose, teaching the social, psychological, and health gains to be realized by abstaining from sexual activity;
 - (B) teaches abstinence from sexual activity outside marriage as the expected standard for all school age children;
 - (C) teaches that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems;
 - (D) teaches that mutually faithful monogamous relationship in context of marriage is the expected standard of human sexual activity;
 - (E) teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects;
 - (F) teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society;
 - (G) teaches young people how to reject sexual advances and how alcohol and drug use increases vulnerability to sexual advances; and
 - (H) teaches the importance of attaining self-sufficiency before engaging in sexual activity.
-

Source: Welfare Reform Law, 1996.

Need for the Study

Due to substantial funding and a variety of supportive school policies, abstinence-only education appears to be a component of the U.S. public education system for the foreseeable future. It is appropriate, therefore, to try to understand as much as possible about this form of education, which focuses on adolescent sexual abstinence.

The school principal has been identified as highly influential in changing the way schools operate. School principals have been found to both influence communication patterns within a school and to bring together school networks to integrate a variety of school activities throughout

grades or classrooms (Friedkin & Slater, 1994). Within the school there is a network, including the principal, which enhances student performance (Teske & Schneider, 1999).

The principal is also a leader. The effective principal exhibits leadership skills through long-term and short-term changes seen in the school community. The principal engages staff, students and the community in sharing a commitment to the school. Because of the accountability system set up in public schools, there is little question that school principals are influential in the adoption of educational interventions, including abstinence education programs (Cooley & Shen, 2003). Due to a lack of knowledge and information of school administrators' support of abstinence-only-until-marriage education, research is needed to help educators appreciate and understand the influence of administrators' adoption on abstinence education. Further research is needed to enhance understanding of the principal's role in the adoption process and the principal's perception of the attributes of sexual abstinence programs.

Research Questions

To more fully understand the adoption of abstinence-only-until-marriage programs by school principals, the following research questions were examined:

- Does a principal's perception of the relative advantage of abstinence-only-until-marriage education affect the likelihood of his or her adopting abstinence-only-until-marriage education?
- Does a principal's perception of the compatibility of abstinence-only-until-marriage education with his or her professional beliefs affect the likelihood of his or her adopting abstinence-only-until-marriage education?
- Does a principal's perception of the compatibility of abstinence-only-until-marriage education with his or her personal beliefs affect the likelihood of his or her adopting abstinence-only-until-marriage education?

- Does a principal's perception of the complexity of abstinence-only-until-marriage education affect the likelihood of his or her adopting abstinence-only-until-marriage education?
- Does a principal's perception of the trialability of abstinence-only-until-marriage education affect the likelihood of his or her adopting abstinence-only-until-marriage education?
- Does a principal's perception of the observability of abstinence-only-until-marriage education affect the likelihood of his or her adopting abstinence-only-until-marriage education?
- Which of the perceived characteristics of abstinence-only-until-marriage education as an innovation best predict the likelihood that school principals will adopt the abstinence-only-until-marriage education?

Basic Assumptions

For this research, it was assumed that school principals are concerned with increased funding for abstinence-only-until-marriage education and how this may affect their schools and their schools' curricula. Further, it was presupposed that this concern will motivate principals to participate in the present study and that abstinence-only-until-marriage education requires, as do all other educational efforts, valid and reliable evaluations.

It was also assumed that middle school principals were able to understand the language and terminology used in the (a)-(h) definition as a component of the questionnaire. It was presumed that participants were able to accurately and truthfully answer questions regarding relative advantage, complexity, compatibility, observability and trialability of abstinence-only-until-marriage education. There was a final assumption that principals were able to answer the questionnaire honestly and thereby submit appropriate data.

Delimitations

This study was delimited to middle school principals at public, regular education instructional campuses in the state of Texas for the school year 2003-2004. The central issue of this study was the principals' adoption of abstinence-only-until-marriage education.

Limitations

This study was limited to self-reported data provided by middle school principals. Self-reported data may represent skewed or biased opinions. Additionally, the study may have been limited by the length of the six-page survey, precluding the inclusion of other variables of interest. Finally, the amount of time it took the principal to complete the survey (approximately ten minutes), may have influenced the quality of his or her responses. The number of responses also may be a limitation of the study; there was a forty-six percent response rate. Four hundred surveys were completed and used for the final data analysis. Nevertheless, the response rate obtained yielded the sample size required for achieving statistical representation of the study population.

Key Terms

A *principal* was defined in this study as a school administrator who served as a leader for public middle schools. *Middle schools* were those schools in Texas offering sixth through eighth grades to eligible students, but the designation is a local decision, and grade ranges differed among school districts. *Public schools* were those that were publicly funded, as opposed to privately funded. This study only included *regular education instructional campuses*, which were schools that provided instruction in the form of traditional curriculum and instruction for early education through twelfth grade; however, the focus was on middle schools identified by the Texas Education Agency.

For this study, *abstinence-only-until-marriage education programs* referred to programs that promote abstinence-only-until-marriage as the expected standard of behavior in a directive manner.

Adhering to the (a)-(h) definition, the programs provided students with information on healthy relationships, levels of intimacy, the benefits of abstinence and the consequences of premarital sexual behavior (Abstinence Clearinghouse, 2001).

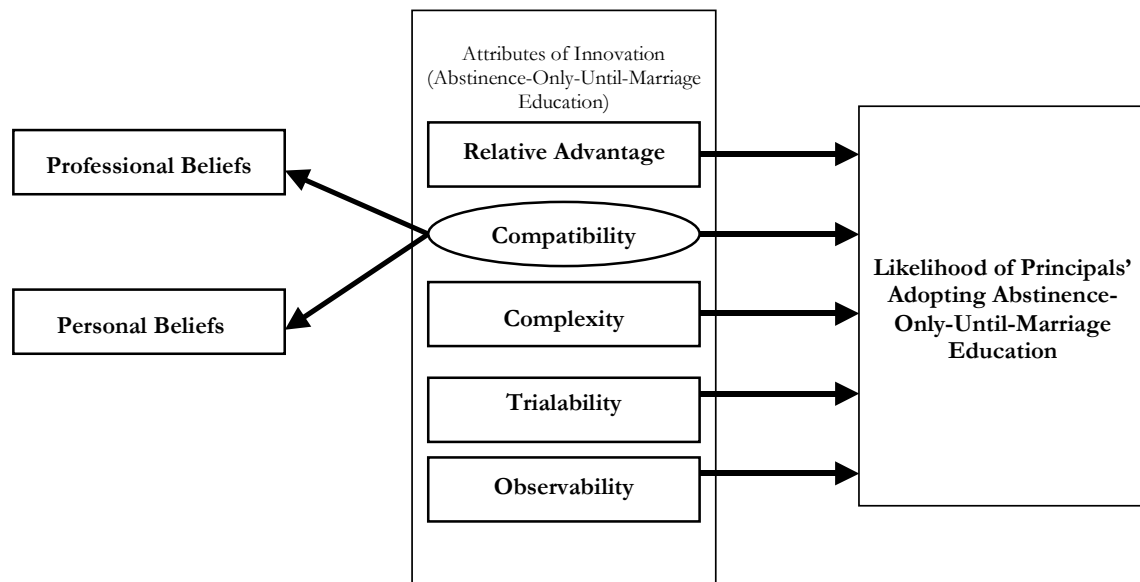
Theoretical Background

Diffusion of Innovation theory provided the framework and foundation for this research. The theory analyzes and explains the adoption of new ideas or new practices, an innovation, by members of a social system (Rogers, 1995). The members of a social system in this research were all middle school principals in Texas. The innovation was abstinence-only-until-marriage educational programs for youth.

Rogers (1995) provides a categorization of innovation adopters according to the time required for adoption to take place. Some public school principals will adopt abstinence-only-until-marriage education programs, the innovation, more quickly than others. Rogers (1995) classifies those who adopt an innovation early as “innovators,” and those who are slow to adopt an innovation as “laggards.” He also describes categories between these two extremes as “early adopters,” “early majority” and “late majority.”

According to Rogers (1995), the five perceived attributes of an innovation help explain its rate of adoption. These are “relative advantage,” “compatibility,” “complexity,” “trialability” and “observability.” This study measured middle school principals’ perceptions of the attributes of abstinence-only-until-marriage education—relative advantage, compatibility, complexity, trialability and observability—and the principal’s likelihood of adopting of abstinence-only-until-marriage education. In consideration of the principals’ schedules, it was necessary to examine only the perceived characteristics of abstinence-only-until-marriage. This study’s logic model is depicted in Figure 1.

Figure 1: Likelihood of Principals Adopting Abstinence-Only-Until-Marriage Education: A Logic Model Adapted from Diffusion of Innovation Theory (Rogers, 1995).



Dependent Variable

The dependent variable measured in this study was the “Likelihood of Principals Adopting Abstinence-Only-Until-Marriage Programs in their Schools.” Conceptually, this variable defines the likelihood that middle school principals will include the abstinence-only-until-marriage message in their curricula.

Independent Variables

For the purpose of this study, the adopters’ “perceptions” of an innovation were measured as “attitudes.” Attitude was operationalized by individual beliefs (outcome expectations) and values (outcome expectancies) about outcomes or attributes of performing a specific behavior (Montano, Kasprzyk, Taplin, 1997). Expectation and expectancy questions were asked about the five attributes

of abstinence education as an innovation: relative advantage, compatibility, complexity, trialability and observability. Perceptions of whether abstinence-only-until-marriage education is compatible with one's values were proposed as a latent variable, measured by two indicators: professional and personal beliefs. For each characteristic, the respondents' "perception" scores were calculated by multiplying each expectation and corresponding expectancy scores and summing the products.

"Relative advantage" is a characteristic of an innovation referring to the degree to which an innovation is better than the idea or the practice it supercedes (Rogers, 1995). Respondents were asked, for example, if they agreed with the statement, "I believe one of the advantages of abstinence education is to reduce the number of unwanted pregnancies among youth."

"Compatibility" shows the degree to which an innovation is coherent with current values, experiences and beliefs of adopters (Rogers, 1995). In this study, compatibility was proposed as a latent variable, measured by asking the respondent about personal and professional beliefs, with items such as: "I agree or disagree abstinence education is consistent with my professional standards."

According to Rogers, the degree to which an innovation is seen as difficult to understand and to use is known as "complexity." Abstinence education may require an understanding of character-based education-related terminology or the understanding of required policies. Complexity will be measured by asking, "How easy or difficult is it for you to understand policies regarding abstinence-only-until-marriage education?"

A fourth construct, "trialability," refers to the adopter's ability to experiment with an innovation on a restricted basis. Trialability does not require total commitment; adopters can see how the innovation works in their environment (Rogers, 1995). A trialability question for this study asked respondents if they agreed or disagreed with the statement, "Abstinence education can easily be incorporated into my school's curriculum on a trial basis."

The final construct, “observability,” refers to how the results of the innovation are noticed by others. When an innovation is easily observed and accepted by other members of the same social system, adopters are more likely to adopt the innovation. Respondents were asked if they agreed or disagreed with statements such as the following: “Most middle school principals are adopting abstinence education into their schools’ curricula.”

According to Rogers (1995), diffusion occurs within a social system. The structure of the social system affects the innovation’s diffusion. The Diffusion of Innovation theory proposes that the social system helps set the speed and extent of the diffusion. For this study, the location of the principal’s school in a rural or urban county was examined as having a possible moderating effect on other variables.

Research Design

This study employed a survey design. The Abstinence-Only-Until-Marriage Adoption Survey was used. The instrument was constructed to measure administrators’ perceptions of the innovation characteristics of abstinence education. The Abstinence-Only-Until-Marriage Adoption Survey was designed to measure the likelihood of adoption of abstinence education by middle school principals. Literature on abstinence education, school administration, and The Diffusion of Innovation theory, along with a two-year evaluation of abstinence-only education programs in Texas informed the development of the instrument.

Each item was written to assess indicators of adoption of abstinence-only-until-marriage education by middle school principals. Likert-type scales were used for response options. A draft version of the survey was developed and a panel of school personnel and abstinence educators was asked to review the questions for content validity. Appropriate changes were made to the survey and a final instrument for the pilot study was created.

A pilot study designed to test the questionnaire was conducted with a convenience sample of approximately 200 junior high school principals in Texas. The school administrators' names were obtained from the Texas Education Agency. A packet containing a cover letter, informed consent, survey and return envelope was mailed to the administrators. Upon completion of the survey, the administrator returned the survey to the researcher.

As each survey was returned, the envelopes were separated from the surveys, to assure confidentiality. The data from the returned surveys were entered into SPSS® (Statistical Package for the Social Sciences version 11.0) and analyzed. Results guided appropriate changes for the development of the final instrument for middle school principals.

Sample

The population of interest for this study was principals of Texas public middle schools. A random sample of principals (N=904) was chosen from the Texas Education Agency 2003-2004 directory of middle school principals. For a population size of 1105 middle school principals as reported by the Texas Education Agency, a total sample size of 299 was needed to reach statistical representation with a $\pm 5\%$ error rate at the 95 percent confidence level (with a 50/50 split) (Salant & Dillman, 1994). The random sample of N=904 took into account a response rate of 30 percent, common for a school administrator population (Dillman, 2000). The study's sample size of 433 (394 from final study; 39 from pilot study) reached statistical representation for the population of middle school principals in Texas (Dillman, 2000). For the usable surveys, a response rate of 48% was obtained. In addition, representation was achieved for each individual Education Service Center Region. The response rate from each region ranged from 36% to 70%.

Data Collection

The sample of middle school principals was surveyed using a mailed questionnaire with four contacts. Initially, a pre-notice letter was sent to principals, notifying them that they would receive a survey in one week (Appendix C). The first wave of data collection was a mail-out package containing a cover letter (Appendix C), a questionnaire (Appendix B), an informed consent form (Appendix C), and a return-addressed, stamped envelope. Approximately two weeks after the first mail-out, reminder postcards (Appendix C) were sent to those who had not responded. Due to an expected low response rate from principals, a second mail-out package was prepared for a second wave of data collection, and was sent out to the remaining non-responders approximately four weeks after the initial mail-out (Appendix C) (Dillman, 2000).

None of the surveys asked for identifying information. In addition, as each returned survey was received, the envelope was separated from the survey to assure confidentiality. To prevent duplicate second mail-outs, surveys were tracked by a number code. Only the researcher had access to the number codes. Data from the returned surveys were entered into SPSS and analyzed.

Data for non-respondents were compared with data for respondents. There was no significant difference between the gender of respondents and non-respondents. The areas of the non-respondents showed a difference between rural or urban areas of responders and non-responders. Principals in urban areas were more likely to respond. There was also a significant difference in the African American responders and non-responders, where as there was not a significant difference with other ethnicities, indicating that African Americans were underrepresented in the study. Further description of the respondents and non-respondents is described in Chapter IV of this dissertation.

Data Analysis

Data were analyzed using SPSS® (Statistical Package for the Social Sciences version 11.0). Descriptive statistics were used to assess the accuracy of input and the distribution of responses (Gall, Borg & Gall, 1995; Tabachnick & Fidell, 2001). Concerns for missing data included the pattern of missing data, the extent to which data were missing and why data were missing (Tabachnik & Fidell, 2001; Allison, 2001). Skewness and kurtosis were used to screen the distribution of responses for normal distribution (Tabachnik & Fidell, 2001). Correlational techniques were used to study the relationships among variables (Gall, et al., 1995; McDermott & Sarvela, 1999). Factor analysis was used to find the patterns of variation among each scale's items (Vogt, 1999; Tabachnick & Fidell, 2001). Multiple regression analysis was used to examine the interactions among variables (Tabachnick & Fidell, 2001). Discussion and results of data analysis are presented in Chapter IV of this dissertation.

CHAPTER II

LITERATURE REVIEW

The purpose of this study was to assess indicators of adoption of abstinence-only-until-marriage education as an innovation by middle school principals in the state of Texas. This study also assessed school principals' likelihood of adopting such programs. Chapter II is separated into three sections. The first section chronicles youth risk behaviors and sexuality-based education. This section emphasizes abstinence education and influential recent legislation related to issues of abstinence-only-until-marriage education. The second part of the literature review examines the principal's role in school and school-based programs. Finally, the connection between abstinence education programs and the principal's role is highlighted in the third segment, which discusses Diffusion of Innovations Theory, the theoretical framework for this study.

Introduction

Throughout the past several decades, public opinion has remained stable regarding sexuality education. The majority of U.S. adults and parents favor school-based sexuality education for children and adolescents (Darroch, Landry & Singh, 2000; Kirby, 2000; Lickona, 2000; Rodriguez, 2000; Haffner & Wagoner, 1999). Even with this public support, however, there is disagreement on which topics should be covered. Many adults feel abstinence should be taught as the only effective method of preventing pregnancy or STIs/STDs (Sexually Transmitted Infections/Sexually Transmitted Diseases), while others feel contraception also should be included in sexuality education (Rodriguez, 2000; Kirby, 2000).

Due to the allocation of federal funding, the abstinence message has become a prevalent message found in the public schools (Kempner, 2003). The abstinence-only-until-marriage message

encourages adolescents to adopt sexual abstinence as their primary method of preventing pregnancy and STIs/STDs. In addition, a variety of school policies encourage instruction about abstinence in many states, making abstinence-only a salient component of the public education system.

Risky behaviors are a primary threat to adolescents' health, and schools play a role in protecting against health risk behaviors (Resnick, et al., 1997). Schools also face the challenge of addressing adolescent behaviors, including adolescent sexuality. Despite differing opinions, a variety of school-based programs have been designed to delay the initiation of sexual activity, an adolescent risk behavior (Silva, 2002). Lessons learned from efforts to implement coordinated school health programs, large-scale statewide assessments and substance abuse prevention programs indicate that the key to a successful program is a school principal or assistant principal who recognizes the importance and value of the program (Marx & Wooley, 1998; Goertz & Duffy, 2003; Hallfors & Godette, 2002).

The school principal can support or undermine a program within a school through a variety of beliefs and behaviors. Support for any sexuality-related program is important, because it provides the infrastructure needed to implement effective programs (Hallfors & Godette, 2002). Although school principals play a key role in program implementation, little is known concerning the role the principal plays in the adoption of abstinence education in U.S. public schools.

Youth Risk Behavior

For several decades, school educators have had concerns regarding sexual issues. In the 1970s the heightened teenage pregnancy rate was a concern; in the mid-1980s concerns focused on HIV/AIDS (Kirby, 1991). These issues reflect trends in adolescent sexual behavior. Currently, overall rates of sexual activity, pregnancy, and childbearing among young people are decreasing, and contraceptive and condom use is increasing. However, there has been an increase in numbers of adolescents who engage in sexual intercourse at an earlier age (with most measures of adolescent

sexual activity focused on vaginal intercourse) (Terry & Manlove, 2000; Alan Guttmacher Institute, 1997). Recently, however, health professionals and the popular press have stated that adolescent non-sexual behaviors, such as mutual masturbation, oral sex, and anal sex are a major component of adolescent sexual behaviors (Remez, 2000; Taboada, 2003; Batchelder, 2003).

Adolescents who engage in early sexual activity put themselves at risk for pregnancy, STIs/STDs, and other potentially negative consequences. Each year in the United States, approximately one million women aged 15 to 19 become pregnant, and a majority of these pregnancies are unintended (Alan Guttmacher Institute, 1997). Furthermore, one-quarter of all new HIV infections occur among people under 21 years of age. Adolescents also have the highest rates for other STIs such as Chlamydia and Gonorrhea (CDC, 2001).

Sexuality Education

Sexuality education has been multifaceted in the United States. Although the topic of sexuality education is taught in most schools, a prevailing focus of sexuality education is on abstinence. In reality, however, students are from a wide variety of backgrounds and experiences, and they have a vast assortment of needs. Instructors using abstinence-only, abstinence-based, comprehensive sexuality education and youth development programs present a variety of methods and common topics including responsibility, STIs/STDs and human reproduction (Darroch, Landry & Singh, 2000).

Historically, sexuality education efforts focused on whether or not schools should be conducting such activities at all. Beliefs and practices related to sexuality education were frequently controlled by school administrators and local communities (Wilson, 2000). More recently, however, the controversy surrounding school-based sexuality education is not concern about whether or not to teach sexuality education, but rather what kind of sexuality education to teach (McKay, 1999; Young & Goldfarb, 2000; Wilson, 2000). Even though abstinence is a valued outcome of

comprehensive sexuality programs, the effectiveness of abstinence versus comprehensive interventions has not been revealed (Silva, 2002). *Comprehensive Sexuality Education*, one form of sexuality education, teaches that abstinence is the best method for avoiding STIs/STDs and unintended pregnancy, but also teaches about condoms and contraception to reduce the risk of unintended pregnancy and STIs/STDs (a more detailed description of abstinence-only-until-marriage education is explained below) (Kempner, 2001).

Some form of sexuality education has been a part of the school curriculum for many years (Kreinin, 2003; Dailey, 2003). The original aim of school sexuality education was to teach adolescents about their physical and sexual development; however, the term “sexuality education” has several meanings and can include a broad range of topics (Darroch, Landry & Singh, 2000). Some sexuality education courses were expanded to cover topics such as delaying sexual activity, using condoms, and using contraception. However, the legislation supporting abstinence-only-until-marriage education has taken over the comprehensive approach to sexuality education (Smith, 2003).

Tremendous variability exists within schools’ sexuality education curricula, with topics covered ranging from reproductive biology to contraceptive methods (Albert, Brown, & Flanigan, 2003). Sexuality education classes tend to focus on the biological, emotional and practical issues that provide students with a broad range of knowledge crucial to their personal development and future sexual health (Lindberg, Ku & Sonenstein, 2000). Along with incorporating sexuality education into the curriculum, schools may implement programs to address health issues such as adolescent pregnancy, HIV/AIDS infection, and other STIs/STDs (Greene, 1998; Tingle, 2002). Other programs focus on teaching youth about pregnancy and parenting. One example used infant simulators to improve learning about the difficulties of parenting (Tingle, 2002; Kralewski & Stevens-Simon, 2000; Somers & Fahlman, 2001). In addition, some educators focus on youth acquiring effective communication, coping and decision-making skills to prevent risky behaviors

(Matthews & Menna, 2003). For example, in one school-based program, *Life Skills Training*, youth are taught resistance skills and self-management skills relating to a variety of social influences affecting their health; however, not all schools adequately address these topics (Albert, Brown & Flannigan, 2003; Hahn, Noland, Rayens & Christie, 2002).

Most public schools in the United States teach some form of sexuality education, and virtually all public school students have been exposed to sexuality education by the time they graduate high school (Darroch, Landry & Singh, 2000). However, teaching sexuality-related topics in the public schools is often debated (Wilson, 2000). One of the barriers to addressing adolescent pregnancy prevention and STIs/STDs prevention within schools is community resistance. While resistance may come from a variety of sources ranging from parents to school board members (Greene, 1998), school officials and other community leaders often recognize that sexual activity and dating are important issues for youth that cannot be ignored (Albert, Brown & Flannigan, 2003).

Several different types of programs focus on pregnancy prevention. Curricula-based programs are typically implemented in schools. In *Emerging Answers*, Kirby (2001) divides these programs into two groups: abstinence-only education and sex/HIV education. A number of sexuality education programs focus on training parents to talk with their children about sexuality-based topics. Some programs have been designed to improve access to condoms or other contraceptives. Finally, many communities have created initiatives with multiple components to help prevent out-of-wedlock pregnancy (Kirby, 2001).

Programs within sexuality education have evolved since the 1970s. Thomas (2000) identifies four generations of sexuality programs: programs that focus on the risks and consequences of teen pregnancy, programs that emphasize decision making and communication, programs that teach abstinence with the exclusion of information about contraception (also known as abstinence-only or abstinence-only-until-marriage) and programs that combine the three other generations but emphasize reducing HIV transmission (Thomas, 2000).

Kirby (1992) identifies five generations of curricula to reduce teen pregnancy and STI/STDs. The first of Kirby's five generations included curricula that focused on increasing knowledge and emphasized the risk and consequences of pregnancy. The second generation included knowledge content, but focused on values clarification and individual-level skills, such as decision-making and communication skills. The third generation of curricula was considered abstinence-only curricula, which discussed abstinence as the only way to prevent pregnancy and STIs/STDs, but did not address contraception. HIV/AIDS education programs, designed to change adolescent sexual behavior, represented the fourth generation of curricula. The fifth generation of curricula consisted of sex education programs based on theoretical approaches and focused on the success and failures of previous programs (Kirby, 1992).

Sexuality programs can further be divided into three distinct categories: those with a focus on sexual antecedents, those concentrating on non-sexual antecedents, and those emphasizing both sexual and non-sexual antecedents (Kirby, 2000). Researchers have tried to identify the factors, or antecedents, that influence whether adolescents will have sex, use contraception, or become pregnant. Some of the factors are related to increased sexual risk-taking. Protective factors emphasize the chance of reducing risky sexual behavior (Kirby, 2001).

Ten characteristics of effective sexuality education curricula have been identified by Kirby, of Education, Training, Research Associates (Kirby, 1997; Kirby, et al., 1994). Research in other areas of adolescent health such as drug use and violence also supports these 10 characteristics of effective programs (Dusenbury & Falco, 1995):

1. Focus on reducing one or more sexual behaviors that lead to unintended pregnancy or HIV/STD infection.
2. Based on theoretical approaches that have been demonstrated to be effective in influencing other health-related risky behaviors.
3. Give a clear message about sexual activity and condom or contraceptive use and continually reinforce that message.

4. Provide basic, accurate information about the risks of teen sexual activity and about methods of avoiding intercourse or using protection against pregnancy and STIs/STDs.
5. Include activities that address social pressures which influence sexual behavior.
6. Provide modeling and practice of communication, negotiation, and refusal skills.
7. Employ a variety of teaching methods designed to involve the participants and have them personalize the information.
8. Incorporate behavioral goals, teaching methods and materials that are appropriate to the age, sexual experience and culture of the students.
9. Last a sufficient length of time to complete important activities adequately.
10. Select teachers or peer leaders who believe in the program they are implementing and provide them with training (approximately six hours to three days)

(Kirby, 1997; Kirby, et al., 1994; Kirby, 2001)

Society Manages Youth Sexual Behavior

Considering the consequences of teenage sexual activity, sexuality-based education has become an issue of social concern. For some time, the federal government's involvement with sexuality education has been increasing. In a provision of the welfare reform legislation, Congress mandated abstinence-only education with a designated \$50 million through the Maternal and Child Health Bureau.

According to the Abstinence Clearinghouse (2001), a center for abstinence resources, abstinence-only-until-marriage programs refer to "programs that promote abstinence-until-marriage as the expected standard of behavior in a directive manner." Abstinence-only-until-marriage programs provide students with information about building healthy relationships, levels of intimacy, benefits of abstinence and consequences of premarital sexual behavior (Abstinence Clearinghouse, 2001).

Although abstinence and comprehensive programs differ in their underlying values, both foster decision-making and problem-solving skills for adolescents (Silva, 2002; Frost & Forrest,

1995). However, there has been a sustained social concern from proponents of abstinence-only education that sexuality and HIV/AIDS education programs send the “wrong message” to youth. Many abstinence-only proponents believe that teaching about condoms and contraception “teaches” young people how to have sex. They believe that teaching youth to reduce the risk of acquiring an STD/STI or becoming pregnant motivates teens to engage in sexual behavior. Evaluation studies have not found evidence to support this viewpoint (Kirby, 1999).

Extensive problems exist related to consistency of professional and public use of terminology related to sexuality and abstinence education. According to Kreinin (2003), one of the successes of the abstinence-only-until-marriage movement has been its leaders’ ability to define terms. However, recently researchers found substantial variability in how the term “abstinence” was defined (Goodson, Suther, Pruitt & Wilson, 2003). Furthermore, the challenges related to terminology and definitions are reflected through a variety of stakeholders’ concepts, experiences and values, thus influencing educational implementation and student understanding.

Government Funding of Abstinence Education

Due to the negative social consequences of adolescent sexual activity, educators have responded with several prevention programs, including abstinence-focused sexuality education. Several comparisons have been done of the various types of abstinence-based sexuality education programs (Thomas, 2000). Abstinence-only education teaches that abstinence from sexual intercourse is the only morally acceptable option for teenagers. Abstinence-only education is known to repress information about contraception and condoms for the prevention of pregnancy and STIs/STDs. Abstinence-only-until-marriage education teaches that abstinence is the only morally correct option regarding sexual behavior for unmarried individuals. Many abstinence-only-until-marriage programs exist along a continuum between abstinence-only and abstinence-only-until-

marriage, are funded under the 1996 Welfare Reform Act and adhere to the (a)-(h) definition of abstinence education (see Table 1) (Kirby, 2001).

The attention given to abstinence education in U.S. schools increased during the 1990s (Silva, 2002). Much of this growth was related to federal funding of abstinence-only-until-marriage programs (Darroch, Landry & Singh, 2000; Albert, Brown & Flanigan, 2003). Two federal programs funded, and continue to fund, abstinence education as the central component of school-based sexuality education (Batchelder, 2003). Funds are provided through the Adolescent Family Life Provision under Title XX, and a block grant from the welfare reform initiative.

Abstinence efforts gained further visibility when Congress passed the welfare reform initiative and the law was signed by President Clinton to support programs focusing on the abstinence-only-until-marriage message (National Campaign to Prevent Teen Pregnancy, 1998). The 1996 welfare reform legislation committed \$250 million for distribution over a five-year period to support educational programs for the exclusive purpose of promoting abstinence outside of marriage. Programs funded under this initiative are expected to support marriage as the standard for sexual activity and are expected to adopt the (a)-(h) definition of abstinence education (see Table 1). The Bureau of Maternal and Child Health, the federal agency responsible for allocating these abstinence education funds, indicated that programs did not have to meet all eight components of these definitions (Young & Goldfarb, 2000).

Funds for abstinence-only-until-marriage programs are also available through the Social Services Block Grant (Welfare Reform Law, 1996), a general block grant program that can be used by the states to fund a wide variety of social service programs. Services funded through the program include adoption, day care, employment services, family planning, housing, transportation, and many others. The transfer provisions of the welfare reform law also require states to spend these funds on services for children or their families whose income is at 200 percent of the federal poverty level or below (Human Rights Watch, 2002). The Personal Responsibility and Work Opportunity Act

(Welfare Reform Law, 1996) included \$50 million per year provided to state programs that have “as their exclusive purpose teaching the benefits of abstinence until marriage” and specifically teach that “sexual activity outside of marriage is likely to have harmful psychological and physical effects” (Welfare Reform Law, 1996).

Funds also require state and local matching funds. Additional funds from Maternal and Child Health grants and the Office of Adolescent Pregnancy Programs are supporting abstinence education programs. In 2002, the Bush Administration advocated an increase in federal funding for these programs to \$135 million through the year 2007 (Human Rights Watch, 2002). Congressional reauthorization will be required to provide continued abstinence education grant funding to states and jurisdictions in Fiscal Year 2003 (Human Rights Watch, 2002).

Abstinence Education Products and Curricula

The current emphasis on abstinence education facilitated the development of many abstinence-only-until-marriage promotional products. These products range in design from packaged lesson plans to videotapes, posters, and games. Some of these products are specifically designed for sexual abstinence programs, while other products are developed for promoting character, self-esteem, and youth development, which have become primary foci of many abstinence-only-until-marriage programs.

The review of the literature on sexuality education programs emphasizes the need for quality research of abstinence-only-until-marriage programs. Currently, the abstinence message is supported by federal and local funds as well as other locally based policies, but there is little evidence to support its effectiveness (Kirby, 2001; Thomas 2000). Smith, Steen, Spaulding-Givens & Schwendinger (2003) recognize the necessity of further developing the quality of formative and summative studies.

One of the questions surrounding abstinence-based education programs relates to the effectiveness of each program (Frost & Forrest, 1995). Many attempts have been made to alter adolescent sexual behavior, but most of these undertakings have not been accompanied by outcome evaluations (Frost & Forrest, 1995; Kirby, 2001). In a review of five adolescent pregnancy prevention programs, the programs that significantly decreased the proportion of adolescents who became pregnant were two programs that provided access to contraceptive services (Frost & Forrest, 1995). Many other evaluations of abstinence-only programs revealed that those programs did not have a significant impact on sexual activity (Weed, Olsen, DeGaston & Progmor, 1992; St. Pierre, Mark, Kaltreider & Aikin, 1995; Kirby, 1997; Kirby 2001).

An abundance of abstinence curricula is typically used with abstinence-based education programs; however, curriculum-based education programs exist along a continuum (Kirby, 2001). For example, some programs will focus on abstinence as the *only* healthy choice for young people, whereas other programs will discuss condom and contraception use. Others discuss condoms and contraception only with regard to their failure rates. Many sexuality programs describe abstinence as the safest way to prevent pregnancy and STIs/STDs, while also encouraging the use of condoms and contraception. Programs designed for youth at high sexual risk stress consistent use of condoms and contraceptives.

Many abstinence-only programs are utilizing a curriculum, in some form. However, the effectiveness of abstinence programs and their curricula have been recently questioned. In 1994, Kirby and others evaluated three abstinence programs, all three of which failed to produce statistically significant amounts of behavior change. Three years later, six additional programs also failed to show significant changes in behavior (Kirby, et al., 1997). An evaluation of the program called *Sex Can Wait* found some increases in knowledge at the elementary level. *Life's Walk*, another curriculum, was found to have increased knowledge about sexuality, but it resulted in no difference in attitudes, behavior, or communication (Barnett & Hurst, 2003).

Presently, researchers are finding that abstinence-only-until-marriage programs are focusing on youth development, character education, or character formation. Kirby (2001) describes these programs as having messages that focus primarily on non-sexual antecedents. These programs may include early childhood programs or youth development programs for adolescents (Kirby, 2001). Furthermore, many of the focal points of these programs affect adolescents' sexual antecedents, which influence sexual behavior. Since these programs are not focusing on sexuality issues, the question becomes, are abstinence education (youth development) programs taking the place of sexuality education?

Factors Influencing the Adoption of School Curricula/Programs

Parents, program leaders, school officials and others contribute to the adoption of school-based abstinence programs. Principal support is an important first step in establishing priorities and commitment to program implementation; however, other elements influence curriculum adoption as well (Albert, Brown & Flanigan, 2003; Resnick, et al., 1997).

Support can greatly influence the decision to adopt and implement a curriculum. In a previous study, educators adopted a student achievement curriculum with the belief that their colleagues, communities and students would support adoption (Oakes & Wells, 1998). Jacobs (1991) identifies a plan for curriculum integration from another perspective. The curriculum plan includes the following four phases: conducting research, developing the proposal, implementing and monitoring a pilot adoption and adopting the program. This four-phase plan would be conducted over a three-year period (Jacobs, 1991). Ogletree and others (1995) also identify several decision questions for adopting curriculum. When considering sexuality-related curriculum selection and adoption, researchers acknowledge that there are important issues to address regarding the curriculum: is the curriculum developmentally appropriate, is the curriculum effective in skill

building strategies, does the curriculum address individual needs and styles and is the curriculum easy to implement (Ogletree, et al., 1995).

Schools and Adolescent Sexual Behavior

One challenge facing public schools today is the governance of adolescent behaviors. Educators are expected to take the first step in establishing practices to enhance protective factors for youth and to reduce their risk for unwanted outcomes (Resnick, et al., 1997). Schools often address adolescent pregnancy prevention and prevention of STIs/STDs through school-based or community-linked education and support programs (Greene, 1998). Kirby and colleagues (1997) and Thomas (2000) cite examples of various methods through which programs have addressed the social pressures relating to adolescent sexual behavior. Curricula that teach problem solving skills have been used in multiple disciplines addressing adolescent health and have been found to be effective in social competency and decision-making skills (Dusenbury & Falco, 1995). Additionally, Thomas (2000) found that the use of role models, role playing and instruction in the utilization of refusal, negotiation and communication skills could help reinforce the message of sexuality education programs. Kirby (1994) also acknowledges the importance of emphasizing values and norms when focusing on skill development. Moreover, school engagement and school connectedness have been found to be critical in preventing a variety of risky behaviors (Resnick, et al., 1997).

Teaching of Abstinence-Based Sexuality Education

While the promotion of sexual abstinence is a component of comprehensive sexuality education (Wilson, 2000), even the notion of teaching sexual abstinence is not agreed upon (Young & Goldfarb, 2000). Some health educators do not support abstinence education programs, and they identify a variety of reasons for this non-support. Some opponents suggest that few rigorous

evaluations of existing abstinence education programs have been conducted to indicate that these abstinence programs delay the onset of sexual intercourse. Others suggest that evaluations have not concluded whether the abstinence-only program model is or is not effective (National Campaign to Prevent Teen Pregnancy, 1998). Moreover, some professionals discredit abstinence education because they feel it withholds appropriate and potentially life-saving information from school-aged youth (Kenny & Sternberg, 2003; Human Rights Watch, 2002).

Instructors' professional training is another factor that discredits the reputation of abstinence-only-until-marriage programs. Most instructors of abstinence-only education are teachers of biology, physical education, family or consumer science, or health education (Darroch, Landry & Singh, 2000; Wilson, Pruitt, Goodson & Suther, 2003). Few have taken courses in sexuality education, and even fewer have received certification as sexuality educators. Furthermore, few have been trained on sexuality topics or child/adolescent development issues.

This lack of professional education is a source of considerable concern, because the lack of training in sexuality-based areas can lead to instruction from ideological perspectives or agendas rather than scientific evidence (Rodriguez, 2000). The knowledge and attitude teachers possess may ultimately influence their presentation of the abstinence-only education programs (Bowden, Lanning, Pippin & Tanner, 2003). Additionally, a significant proportion of teachers who define their teaching as abstinence-only oppose the notion that contraceptive use is acceptable for young people and agree that teaching contraception leads to sexual activity (Darroch, Landry & Singh, 2000).

Many teachers believe that their schools' administrations are nervous about community reaction to sexuality education, including abstinence education. Many teachers and parents believe that sexuality education should be introduced earlier and with age-appropriate topics (Wilson, 2000; Landry, Singh & Darroch, 2000). Because only a small proportion of schools offer required courses on sexuality issues and topics, health education and sexuality education teachers feel unsupported by

school administrators (Landry, Singh & Darroch, 2000; Goldfarb, 2003). As a result, teachers feel the sexuality education programs they teach may not be adequately meeting their students' informational needs.

Principal's Role in the School

The principal plays an important role in the school because he or she is a link between administration and instructional activities in the schools. Although principals serve in a higher administrative position, they maintain a common status with teachers; therefore, they are also the link between school policies and professional educators (Friedkin & Slater, 1994). One important function of principals is to hold school administrators and educators accountable for their actions. In turn, teacher accountability helps motivate students to perform better, and helps encourage teachers to have quality instructional content and strategies (Matthews & Menna, 2003).

Principals also help align the formal organization within the school environment (Friedkin & Slater, 1994). There has been a growing focus on standards and accountability in schools. Policies help to assure instructional performance and progress of students. The principal supports the school's academic structure by setting clear goals and motivating teachers to reach student achievement goals (Goertz & Duffy, 2003).

Furthermore, the principal is central to the communication and cohesion found within schools (Friedkin & Slater, 1994). The principal not only plays a management role in order to meet educational challenges, but also assumes a leadership role. The effective principal exercises leadership skills through implementation of long-term and short-term changes in the school community. The effective principal also engages staff, students, and the community in sharing a commitment to the school (Goertz & Duffy, 2003). The principal's leadership role is critical to school change and instructional program adoption. The principal plays a role that supports the adoption and implementation of programs. Moreover, schools depend on leadership to shape the

academic setting. The shared leadership involves collaboration on curriculum, instruction and assessment, but the principal is the “leader of instructional leaders” (Marks & Printy, 2003).

From a school or district perspective, principals are hired to act as change agents and are accountable for performing work that furthers the goal of raising student achievement (Ladd & Zelli, 2002). In reference to curriculum adoption, however, teachers and principals have different viewpoints. While the teacher may consider implementation from a classroom-level perspective, the principal’s viewpoint is usually broader (Uhrmacher, 1997). Innovation and implementation are part of the learning process, from both the teacher’s and the administration’s standpoint. The principal, or change agent, individualizes adoption and implementation in a strategic, systemic manner that encourages environmental change (Gray, 2001).

Additionally, the extent of the principal’s understanding, support, and efforts influences the adoption of an innovation (Zaritsky, Kelly, Flowers, Rogers & O’Neill, 2003). For example, *Success for All* was one school-reform program that used the principal as a change agent. The principal’s leadership, in part, helped to accept and shape the school-reform program. The principal’s involvement in supporting classroom teachers and creating a sense of trust in the school was critical to the successful adoption of *Success for All*, and helped to connect school administration and teachers in the effort to change the school structure (Datnow & Castellano, 2001).

From the principal’s perspective, there has been a growing focus on standards and accountability in the schools. Districts and schools are held accountable by both policies and those who lend political support to assure performance and progress of their students. According to Teske and Schneider (1999), the focus on standards and accountability has changed the role of school administrators, giving the principal greater autonomy, particularly as principals prove they can generate success (Teske & Schneider, 1999). A principal’s vision is related to the needs and culture of the school. This vision must be focused and consistent. The principal creates a culture that includes parents, staff, and students, to enhance student performance (Teske & Schneider,

1999). The principal supports the school system and its practice by setting clear goals and incentives to motivate teachers to reach student achievement goals (Goertz & Duffy, 2003).

The principal also plays a central role in communication and in bringing together school networks to integrate a variety of school activities throughout grade levels or classrooms (Friedkin & Slater, 1994). A study focusing on adoption of substance abuse prevention education in the schools revealed that one of the characteristics of adoption process was encouragement of school administrators and teachers to continue using the program (Hallfors & Godette, 2002).

In a variety of educational programs, school principals are considered crucial decision makers who have a significant influence on the adoption, success, or failure of the program. This fact has implications when it comes to adopting or endorsing new products, processes, or designs (Cooley & Shen, 2003). The principal has the authority to support or oppose any instructional program within his or her school (Hill, Wicklein & Daugherty, 1996). The principal creates a foundation for changes within the school curriculum. Additionally, the principal is an active and ongoing supporter of school change efforts. As an instructional leader, the principal is effective at guiding change and supporting classroom teachers (Datnow & Castellano, 2001).

Positive relationships between teachers and administrators are required for substantial changes in the school (Datnow & Castellano, 2001). Lindquist (1974) acknowledges that for the adoption and change process to occur, the people involved must know where the power lies and how it works. The influences involved in change are pertinent to innovation diffusion and the decision making process.

Diffusion of Innovations

Everett M. Rogers' (1995) Diffusion of Innovation theory analyzes and explains the adoption of new ideas or new practices by members of a social system. Diffusion is a process in which an innovation (a new idea, practice, or object) is imparted through specific channels over

time. For Rogers, there are four main elements in the diffusion of innovations: the innovation, the communication channels, time, and a social system (Rogers, 1995).

Rogers (1995) has provided a categorization of innovation adopters according to the time required for adoption to take place. The categorization provides a basic assumption for this research; that is, some public school principals adopt an innovation more quickly than others. According to Rogers (1995), those who adopt an innovation early (innovators) and those who are very slow to adopt an innovation (laggards), are the two “extreme” types of innovators. He also describes categories between these two extremes: early adopters, early majority and late majority.

This research assumes that school principals will adopt an innovation at differing rates and focuses on the adoption-decision process. Rogers (1995) explains three types of innovative decisions: optional innovation decisions, collective innovation decisions, and authority innovation decisions. These three types of decisions range on a continuum: optional innovation decisions are made by an individual, collective decisions are made by groups, and those who possess power, status, or technical expertise make authority decisions. Generally, authority decisions have the fastest rate of adoption and the optional decisions can be made more quickly than collective decisions. The innovative decisions influence the rate of an innovation’s adoption, and over time, the innovation’s idea may change (Rogers, 1995).

According to Rogers (1995), the perceived attributes of an innovation are an important factor in the rate of adoption (the speed with which members of a social system adopt an innovation). Five attributes of an innovation explain its rate of adoption: relative advantage of the innovation, compatibility with existing values and practices, complexity, trialability, and observability.

- **Relative Advantage:** Degree to which an innovation is perceived as better than the idea it supersedes.
- **Compatibility:** Degree to which an innovation is perceived as being consistent with existing values, past experiences, and needs of potential adopters.

- **Complexity:** Degree to which an innovation is perceived as difficult to understand and use.
- **Trialability:** Degree to which an innovation may be experimented with on a limited basis.
- **Observability:** Degree to which the results of an innovation are visible to others (Rogers, 1995).

According to Rogers (1995), diffusion occurs within a social system, and the structure of the social system affects the innovation's diffusion. The members of a social system may be individuals, informal groups, or members of organizations that are functioning to accomplish a universal goal. The Diffusion of Innovation theory proposes that the social system helps set the speed and extent of the diffusion. Rogers explains that the social structure not only affects diffusion, norms of diffusion, roles of the opinion leaders, and types of innovation decisions, but also affects the consequences of innovation.

History of Diffusion of Innovations

An extensive review of the literature revealed that the Diffusion of Innovation theory has been utilized in a variety of settings. Historically, the roots of diffusion research can be found in early European social science research, including sociology and anthropology (Rogers, 1995). In more recent years, Diffusion of Innovation research occurred during the 1960s in the area of agricultural technology. Education researchers began utilizing the Diffusion of Innovation theory in the early 1970s. In 1974, Wyner concluded that the perceptions of those who use an innovation, such as a teacher, can provide data to change agents, such as a principal.

In 1977, Holloway studied the perceptions of school principals. He found that relative advantage and compatibility were the attributes most likely to influence the principal's adoption decisions regarding management-based decisions. Recent research has been conducted in school organizational management concerning the value of the innovation, the cost of adoption, and the influence of accountability in the schools (Zaritsky, et al., 2003).

Diffusion of Innovations in School Programs

The Diffusion of Innovation theory is a general model that has been applied to school programs concerning public health, technology, and education (Zaritsky, et al., 2003). One of the theory's central components is the attributes of the innovation, which include relative advantage, compatibility, complexity, trialability, and observability.

Research on the development and adoption of innovations has been a common interest of individuals applying the Diffusion of Innovation theory. Researchers have deduced that the theory can be easily adapted to understand the adoption of health education interventions (Pankratz, Hallfors & Cho, 2002). Thus, the benefit of an intervention in health education has been correlated to the extent to which the intervention has been adopted and implemented (Oldenburg, et al., 1999).

The school is one organizational environment where innovation adoption and change occur on a continuous basis. Aneke and Finch (1997) determined that likelihood of adoption is important in identifying concerns and perceptions about innovation adoption and implementation. Koszalka (2001) states that involvement in an innovation, in this case classroom web resources, can create a more favorable attitude toward the innovation, and therefore the individual becomes more likely to adopt it.

Surry and Gustafson (1994) determined that compatibility, complexity, and relative advantage were important considerations when an innovation, in this case computer-based learning, was introduced into instructional settings. The Diffusion of Innovation theory provided a model for understanding the adoption of technology innovation in teaching. Researchers concluded that understanding adoption is imperative for effective teaching and learning with new methods of information delivery (Groves & Zemel, 2000).

Concerning technology adoption, Sherry, Billing, Taravlin & Gibson (2000) further conclude that the principal does not have to be a technological leader, but his or her support must

be visible. Furthermore, the adoptive support should be supplemented with resources, structures, and strategies for adoption. In 1996, Rogers commented on the adoption of technology. With the growing awareness and access to the Internet, he noted that all disciplines and institutions adopt and adapt technology resources in their instructional activities (Rogers, 1996).

Research indicates that the biggest threat to the dissemination or success of an innovation is the resistance from the social environment. Individuals or communities with group associations must understand the constructs of an innovation (Martinez-Brawley, 1995). Additionally, it has been assumed that the groups in schools vary according to a person's perspective and position (for example, a principal in a rural area versus urban area). The restricted position or perspective can manipulate the interpretation of an innovation and further influence adoption (Datnow & Castellano, 2001).

Fidelity of implementation is a key interest area in drug prevention interventions and is also a component of the Diffusion of Innovations model. One of the organizational characteristics related to fidelity of implementation is the support of the principal. The quality of leadership and the support of administrators are also of interest for researchers (Dusenbury, Brannigan, Falco & Hansen, 2003). In a study testing the perceived attributes of a federal drug prevention policy, researchers found that the constructs in the theory correlated with a school district's administrative adoption of the policy. Relative advantage, compatibility, and observability were also important predictors of adoption in this study (Pankratz, et al., 2002).

Research examining principal adoption, specifically of school health related programs, has been more limited (Donnermeyer, 1998). Teachers and principals are important decision-makers in the adoption and continuance of programs, such as *DARE*, in the schools. Furthermore, stakeholder groups, such as principals, have been found to influence the adoption of drug prevention and other prevention-related educational programs. (Donnermeyer, 1998). Research

found that the leadership of school administrators influenced the adoption and implementation of school programs (Datnow & Castellano, 2001).

In 1994, Oldenburg and others examined articles published in 12 international public health and health promotion journals. Approximately 11 percent of the studies were classified as diffusion research. The majority of research conducted focused on cardiovascular disease and cancer. Other areas of research included nutrition, smoking, screening, and sex. Most research efforts emphasized change in individuals or small groups (Oldenburg, Sallis, Ffrench & Owen., 1999).

From a public health perspective, the Diffusion of Innovations has been a popular model used with drug prevention policy and curricular adoption. The field of drug abuse prevention in schools has identified factors that inhibit drug use. In developing interventions, however, recent policies have focused more on promoting the active adoption of these programs (Dusenbury, et al., 2003).

Conclusion

Chapter II examined youth risk behaviors and sexuality-based education. Emphasis was given to issues related to abstinence-only-until-marriage education. The principal's role in school and school-based programs was outlined. Finally, the connection between abstinence education programs and the principal's role were highlighted by discussing Diffusion of Innovations Theory.

Given the complex nature of school-based programs, and the complexity involved in their adoption, understanding diffusion characteristics of abstinence-only-until-marriage education within a middle school environment will address the enhance the adoption potential of sexuality education, health education or youth development programs, as abstinence education is integrated into U.S. schools' curricula. Most of the literature on abstinence-only-until-marriage education is atheoretical and limited. This study adds to the existing body of knowledge by examining characteristics of the innovation as proposed by the Diffusion of Innovation theory that may influence middle school principals' adoption of abstinence-only-until-marriage education into their schools' curricula.

CHAPTER III

METHODS

The purpose of this study was to assess indicators of adoption of abstinence-only-until-marriage education as an innovation by middle school principals in the state of Texas. The study also assessed school principals' likelihood of adopting such programs. It was reviewed and approved by the Institutional Review Board—Human Subjects in Research at Texas A&M University (Appendix D).

Chapter III describes the research methods applied in this study. The researcher investigated the phenomena of indicators of adoption and the likelihood of adoption through a survey-based, quantitative research study of Texas middle school principals with representation from each of Texas' 20 Education Service Center Regions.

Background: Evaluation of Abstinence Education Programs in Texas

With funds approved by the 1996 Welfare Reform Act [Section 510, Title V of the Social Security Act (Public Law 104-193)], the Abstinence Education Initiative in the state of Texas began in 1998 and is now in its fifth year of implementation (Welfare Reform Law, 1996). To date (December 2003), over 40 abstinence-only-until-marriage programs statewide have been funded with Title V monies. An evaluation of the abstinence education programs in Texas began in 2000 by a research team from Texas A&M University, Department of Health and Kinesiology, with financial support from the Texas Department of Health. This evaluation was divided into phases. Researchers are currently in phase five of the evaluation.

During fiscal year 2000–2001, the evaluation was implemented in two stages. During Phase 1, abstinence education program proposals submitted to the Texas Department of Health (the state funding agency) were examined. Phase 2 of the evaluation initiative consisted of case studies for eight of the 32 programs funded at that time. The case studies focused on understanding the

adoption and implementation processes these programs were experiencing. Two instruments were drafted: one to measure youth's self-reported abstinence behavior and attitudes, and another to measure program deliverers' beliefs, professional preparation, and self-efficacy concerning delivery of the abstinence-only-until-marriage message.

The third phase of the evaluation took place during fiscal year 2001–2002. This phase included continuation of site visits, or case studies. Eight new programs were visited. In-depth interview data from this phase helped validate previous findings. Researchers also assessed the attitudes of school administrators regarding implementation of abstinence-only-until-marriage education within their schools through a telephone survey of eight administrators. A survey of program instructors and a pilot test of two age-appropriate survey instruments for youth also occurred during Phase 3.

Phase 4 of the evaluation initiative continued the pilot-test of the youth survey. The development of a curriculum evaluation tool and a self-evaluation tool was initiated. Finally, this study of school principals' attitudes toward abstinence education as an innovation was initiated.

The abstinence education evaluation project is currently in Phase 5. The evaluation has found the number of schools implementing the abstinence education message in their curriculum is growing. One of the factors influencing the acceptance of abstinence education programs is the support of school administrators, particularly principals. More detailed information about the abstinence education evaluation in Texas can be found in the Abstinence Education Evaluation Report—Technical Reports 1–4 (Pruitt, Goodson, Suther & Wilson, 2001; Pruitt, Goodson, Wilson & Suther, 2001; Goodson, Pruitt, Suther, Wilson, 2001; Pruitt, Goodson, Wilson, Suther, Davis & Buhi, 2003).

Part of Phase 2 of the abstinence education evaluation project included interviews with program directors. The interviews revealed several barriers and facilitators for abstinence education program implementation. One barrier to program implementation was school administrators'

support. Program directors were asked to provide names of supportive and non-supportive school administrators for participation in telephone interviews. The research evaluation team attempted to interview supportive and non-supportive school administrators during Phase 3 of the abstinence education evaluation project. The purpose of these interviews was to learn about administrators' beliefs regarding abstinence-only-until-marriage education and its role in the public school.

Once the programs provided names of the administrators, a letter, informed consent and interview questions were sent to each administrator. Of the names provided by program directors, researchers were only able to interview the "supportive" school administrators (n=8). The low response rate may have been due to the principals' lack of interest in the topic of abstinence education or to their busy schedules. Interviews were conducted over the phone, and each interview was tape-recorded. Interviews were then transcribed and entered into NU*DIST (Non-numerical Unstructured Data Indexing Searching and Theorizing) software. The data were analyzed by one of the principal investigators of the abstinence education evaluation project.

Findings from the phone interviews indicated bias. As only the administrators identified as supportive of abstinence education were interviewed, they were not only encouraging of abstinence education, some were involved in securing funding for the programs. Administrators interviewed over the phone also observed the abstinence programs in action, and some participated in the programs' events.

This small sample of administrators believed one of the outcomes of abstinence education programs was to change youth's ability to make healthy and good decisions. These administrators also perceived abstinence education to be able to reduce teenage pregnancy and STI levels. It was concluded that "further attempts to investigate the extent of support for abstinence education, state-wide, would provide important contextual information for interpreting future program effects (Goodson, Pruitt, Suther & Wilson, 2003)." For further information on the qualitative study of

school administrators, see Abstinence Education Evaluation Addendum to Phase 3 Technical Report (Goodson, et al., 2003).

The need to understand the role of the principal in schools' adoption of abstinence education led to the conclusion that a more objective study should be conducted. The analysis of the data from these phone interviews informed the development of the present study and its survey instrument.

Design

This study employed a survey design. An instrument to measure the perceptions of the characteristics of abstinence-only-until-marriage education as an innovation was constructed and tested. The instrument also tested the likelihood of its adoption by middle school principals. A panel of experts reviewed the questions for content validity. A pilot study to test the questionnaire was conducted with a random sample of 200 junior high school principals in Texas. Internal consistency and factorial structure of the instrument's scales were assessed during the pilot and final studies.

Instrument and Variables

Findings from the evaluation of abstinence education programs in Texas, a review of the literature, and the Diffusion of Innovation theory guided development of the study survey instrument. The questionnaire was constructed to measure administrators' perceptions of the characteristics of abstinence education as an innovation, and the likelihood of adoption of abstinence education by middle school principals (Fowler, 1995; Dillman, 2000; Fowler, 2002).

The instrument was designed to be short in an effort to increase the response rate (Dillman, 2000; Fowler, 2002). The survey consisted of three sheets of paper, printed on both sides. It contained a total of 75 questions based on innovation characteristics and the likelihood of adoption

of abstinence education. They were followed by 15 demographic questions. The questions were grouped by categories, or factors they were designed to measure. The scales were designed to measure the relative advantage, compatibility, complexity, trialability, and observability of abstinence education programs. There was also a scale to measure the likelihood of principals adopting abstinence education programs. A copy of the final instrument is found in Appendix B.

According to Rogers (1995), diffusion occurs within a social system, and the social system affects the innovation's diffusion. Members of a social system may be individuals, informal groups, or members of organizations. The Diffusion of Innovation theory proposes that the social system sets the speed and extent of diffusion. Whether the respondents' schools are located in rural or urban counties was examined in this study as having a possible moderating effect on other variables.

The adopters' "perceptions" of an innovation were operationalized and measured in this study as "attitudes." An individual's attitude consisted of two dimensions: their beliefs, or outcome expectations, and their values, or outcome expectancies, regarding the characteristics of the innovation of abstinence education (Montano, Kasprzyk & Taplin, 1997). Expectation and expectancy questions were asked about five attributes of abstinence education: relative advantage, compatibility, complexity, trialability, and observability.

Compatibility was a characteristic that was conceptualized as a latent variable, measured by two indicators: compatibility with professional beliefs and compatibility with personal beliefs. For each characteristic, respondents' "perception" scores were calculated by multiplying expectation and expectancy scores for each item, and summing the products for all items in the scale.

"Relative advantage" is a characteristic of an innovation that can influence what is important to adopters. Relative advantage is more likely to sway an adopter's decision if the new innovation is better than a previous idea (Rogers, 1995). For the relative advantage scale, survey questions 1a through 1g measured beliefs of the advantages of abstinence education. Questions 2a through 2g measured how important each advantage was to the respondent. Respondents were

asked to agree or disagree with statements such as “I believe one of the advantages of abstinence education is to reduce the number of unwanted pregnancies among youth.” The corresponding expectancy (values/importance) item would be, “How important is it for you to be able to reduce the number of unwanted pregnancies among youth?”

The seven expectation items for relative advantage used a five-point strongly agree–strongly disagree Likert-type scale; the expectancy items used a five-point extremely important–not important at all Likert-type scale. A higher score for this scale indicated a stronger perception of the relative advantage of abstinence-only-until-marriage education. The 14 items developed to measure relative advantage of abstinence education were based on the goals and objectives reported by abstinence education program directors in the state of Texas. This scale achieved an internal consistency of .89 in the pilot study and .87 in the final study (Gall, Borg & Gall, 1995; McDermott & Sarvela, 1999).

The degree to which an innovation is consistent with current values, experiences, and beliefs of adopters is known as “compatibility” (Rogers, 1995). For the purpose of this study, compatibility was proposed as a latent variable, measured by asking the respondent about personal and professional beliefs. The personal expectation items for compatibility were asked with a strongly agree–strongly disagree Likert-type scale. This set of items asked “How compatible is the following statement with your personal standards?” The professional expectation items for compatibility asked, “How consistent is the following statement with your professional standards.” These items also used a strongly agree–strongly disagree Likert-type scale. The compatibility expectancy questions utilized a five-point extremely important–not important at all Likert-type scale. A higher score on these scale items indicated a stronger perception of the compatibility of abstinence-only-until-marriage education with professional and personal beliefs of the middle school principals.

The expectation and expectancy statements used to measure respondents’ perceptions of abstinence education’s compatibility with personal and professional beliefs/values were adapted

from the (a)-(h) definition of abstinence-only-until-marriage education (this definition can be found in Section 510, Title V of the Social Security Act; see Table 1). The expectation indicators of compatibility with personal beliefs/values were measured with survey questions 3a through 3h. Questions 5a through 5h measured the expectancy indicators of compatibility with personal beliefs/values. The respondent's compatibility with professional beliefs/values was measured with items 4a through 4h, the expectation indicators with professional beliefs/values. Questions 6a through 6h measured the expectancy indicators of compatibility with professional beliefs/values.

The pilot study's internal consistency for compatibility with personal beliefs/values was .89 and internal consistency for compatibility with professional beliefs/values was .94. The compatibility with professional beliefs achieved an internal consistency of .95 and compatibility with personal values achieved an internal consistency of .93 in the final study (Gall, et al., 1995; McDermott & Sarvela, 1999).

In the Diffusion of Innovation theory, the degree to which an innovation is seen as difficult to understand and to use is known as "complexity" (Rogers, 1995). Abstinence education may require an understanding of sexuality-related terminology or the understanding of required resources and policies. Complexity was measured by asking "How easy or difficult is it for you to find resources to deliver the abstinence-only-until-marriage education message?"

The complexity scale consisted of five expectation and five expectancy questions. The complexity expectation items, 7a through 7e, used a five-point very easy–very difficult Likert-type scale, whereas the expectancy questions, 8a through 8e, used a five-point extremely important–not important at all Likert-type scale. A higher score on the complexity scale indicated a perception of abstinence-only-until-marriage education as being easy to understand and to access resources for implementation. The Cronbach's Alpha for the complexity scale was .92 for the pilot study and .86 in the final study.

A fourth construct, “trialability,” refers to the adopter’s ability to experiment with an innovation on a partial basis. Trialability does not require total commitment; adopters can build the groundwork to see how the innovation works in their environment (Rogers, 1995). For the pilot instrument the trialability scale asked four questions: “How much do you agree and how important is it that Abstinence-only-until-marriage education can easily be incorporated into your school’s curriculum?” and “How much do you agree and how important is it that sexuality education programs, other than abstinence-only-until-marriage programs, can easily be incorporated into your schools curriculum?” Due to the low Cronbach’s Alpha (.74) for the trialability scale in the pilot study, the final instrument questions were changed to read, “How much do you agree and how important is it that your school’s curriculum **can** easily incorporate elements of abstinence-only-until-marriage education?” and “How much do you agree and how important is it that your school’s curriculum **cannot** easily incorporate elements of abstinence-only-until-marriage education?”

The two trialability expectation items, 9a through 9b, used a five-point strongly agree–strongly disagree Likert-type scale and the two expectancy questions, 10a through 10b, used a five-point extremely important–not important at all Likert-type scale. A higher score for the trialability scale indicated a stronger perception that elements of abstinence-only-until-marriage education could be attempted on a trial basis. The final study’s internal consistency for the trialability scale was .80.

The final characteristic of the innovation as proposed by Rogers (1995), observability, refers to how the results of the innovation are noticed by others. When an innovation is easily observed and accepted by other members of the same social system, adopters are more likely to adopt the innovation. For the expectation scale, respondents were asked to respond on a five-point strongly agree–strongly disagree Likert-type scale to statements such as the following: “I have seen or heard of other principals in my district adopting abstinence-only-until-marriage education into their school’s curriculum.” A five-point extremely important–not important at all Likert-type scale was

used for the expectancies scale. A higher score for this scale suggests a stronger perception that other principals are adopting abstinence-only-until-marriage education into their schools' curricula. The reliability for the pilot observability scale was .88 and .82 for the final study.

A final scale was developed to measure this study's dependent variable: the likelihood of principals adopting abstinence-only-until-marriage education in their schools. The questions asked how likely the respondent was to apply for grant funding for abstinence education, or allow an abstinence-only-until-marriage program to be presented in their school. The responses included a five-point extremely likely–not likely at all Likert-type scale. Response options allowed for an “I Already Do” answer from the principal. Respondents' scores were summed across all items and a “likelihood to adopt” scale was generated. A higher score on this factor indicated a greater likelihood of adopting the innovation of abstinence-only-until-marriage education. Questions 13a through 13g achieved an internal consistency of .84 on the pilot study instrument. All questions remained the same, but 13f and 13g were repositioned from page six on the pilot instrument to page five on the final instrument. In the final instrument, the likelihood scale had an internal consistency of .95

Pilot Study

This study employed a survey design. The survey instrument was pre-tested in a pilot study (Dillman, 2000). The sample for the pilot study consisted of a random sample of public, junior high school principals in Texas schools. Two hundred names were randomly selected from the Texas Education Agency's directory of junior high school principals (Texas Education Agency, 2003).

A survey (Appendix E), cover letter (Appendix F) explaining the study and informed consent letter (Appendix F) were mailed to selected principals (Dillman, 2000). All items for the pilot study were reviewed and approved by the Institutional Review Board—Human Subjects in Research at Texas A&M University (Appendix D). A pre-addressed stamped envelope also

accompanied the survey, to encourage return of the survey (Fowler, 2002; Dillman, 2000). Upon completion of the survey, principals returned surveys to the researcher.

As each survey was returned, the envelope was separated from the survey, to assure confidentiality. Data from the returned surveys were entered into SPSS® (Statistical Package for the Social Sciences version 11.0) and analyzed. The pilot test was used to determine whether the questionnaire's items were able to generate valid and reliable scores. Factor analysis also was used to determine the validity of scores for the survey's scaled items.

There was a 20% response rate for the pilot study. Forty principals returned the questionnaire; 22 were males and 18 were females (Table 2). Respondent ages ranged from 32 years to 61 years ($M=47$ and $SD=7.5$). Over 70 percent of respondents were white and 15 percent were African American/Black. Most (81.5%) of the principals responding had been principals for fewer than 10 years; one had been a principal for 38 years.

Although the pilot instrument was mailed to junior high principals, most indicated they were middle school principals (Table 3). Responses were received from 28 counties and 13 of 20 Education Service Center Regions in Texas (Table 4).

With the exception of the trialability scale, no differences were found between the pilot study participants and final study participants. Excluding questions 9a, 9b, 10a, and 10c, the pilot study data were merged with the final study's data, increasing the sample size to 433 respondents. Questionnaires received after data analysis was completed are not included in the analysis presented here. Tables describing the results from the pilot study may be found in Appendix G.

Table 2: Frequency Distribution of Selected Demographic Characteristics of Pilot Study Participants

Variable	N	%
Gender		
Male	22	55.0%
Female	18	45.0%
Current Age		
39 years and under	6	15.0%
40 years – 49 years	20	50.0%
50 years – 59 years	12	30.0%
60 years and over	2	5.0%
Ethnicity		
White	31	77.5%
African American/Black	6	15.0%
Hispanic	2	5.0%
Asian, Oriental, or Pacific Islander	1	2.5%
American Indian	2	5.0%
Years of Principalship at any School		
0 – 5 years	17	44.7%
6 years – 10 years	14	36.8%
11 years – 20 years	5	13.2%
21 years and over	2	5.3%
Year Current Principalship Started		
1973-1989	3	8.1%
1990-1999	13	35.1%
2000-2003	21	56.8%

Table 3: Pilot Study Respondent's Professional Practice: Elementary, Middle or High School Principal

Title	N	%
Middle School Principal	38	95.0%
Elementary/Middle School Principal	1	2.5%
Junior/Senior High School Principal	1	2.5%

Table 4: County and Region of Principal's School in Pilot Study					
County	N	%	Education Service Center Region	N	%
Anderson	2	5.1%	I	1	2.6%
Brazoria	2	5.1%	II	1	2.6%
Camp	1	2.5%	IV	7	17.9%
Chambers	1	2.5%	VI	3	7.7%
Dallas	5	12.8%	VII	5	12.8%
El Paso	1	2.5%	VIII	2	5.1%
Erath	1	2.5%	VIV	2	5.1%
Grayson	1	2.5%	X	7	17.9%
Hardeman	1	2.5%	XI	7	17.9%
Harris	3	7.7%	XII	1	2.6%
Harrison	1	2.5%	XIII	1	2.6%
Hill	1	2.5%	XVIII	1	2.6%
Howard	1	2.5%	XVIV	1	2.6%
Johnson	1	2.5%			
Kaufman	1	2.5%			
Lamar	1	2.5%			
Madison	1	2.5%			
Montgomery	1	2.5%			
Nacogdoches	1	2.5%			
Orange	1	2.5%			
Parker	2	5.1%			
Polk	1	2.5%			
Rusk	1	2.5%			
Starr	1	2.5%			
Tarrant	3	7.7%			
Travis	1	2.5%			
Wharton	1	2.5%			
Wichita	1	2.5%			

Factor Analysis of Scales

A factor analysis was conducted for the pilot study and final study to determine if the perceived attribute items were measuring the items as expected. For the analysis, the principle component method was used with a Varimax rotation (Tabachnick & Fidell, 2001). Tables 5 through 16 show the results of the factor analysis for the final study.

The factor analysis for relative advantage revealed two factors within the attribute. The items for factor one assessed the expectancies and expectations of relative advantage from a

population-based standpoint (i.e., advantages related to effects at a population level such as reduction rates for STI/STDs). Factor two assessed the expectancies and expectations of abstinence education's relative advantage from an individual-level perspective (i.e., advantages related to effects on individual youth, such as increasing decision-making skills).

Table 5. Final Study: Factor Loadings for Relative Advantage Expectancy Items

	Factor	
	1	2
1. I believe one of the advantages of abstinence-only-until-marriage education is to...		
Factor 1—Relative Advantage from Population Perspective		
a. Reduce the number of unwanted pregnancies among youth.	--	.884
b. Reduce the number of sexually transmitted infections/diseases among youth.	--	.876
Factor 2—Relative Advantage from the Individual Perspective		
c. Increase youth's self esteem.	.819	--
d. Increase youth's self-efficacy.	.816	--
e. Increase youth's communication skills.	.844	--
f. Increase youth's decision-making skills.	.719	--
g. Increase youth's leadership skills.	.854	--
% of Variance	48.098	25.368
Cumulative %	48.098	73.466

Table 6. Final Study: Factor Loadings for Relative Advantage Expectation Items

	Factor	
	1	2
2. I believe one of the advantages of abstinence-only-until-marriage education is to...		
Factor 1—Relative Advantage from Population Perspective		
a. Reduce the number of unwanted pregnancies among youth.	--	.892
b. Reduce the number of sexually transmitted infections/diseases among youth.	--	.901
Factor 2—Relative Advantage from the Individual Perspective		
c. Increase youth's self esteem.	.797	--
d. Increase youth's self-efficacy.	.792	--
e. Increase youth's communication skills.	.865	--
f. Increase youth's decision-making skills.	.724	--
g. Increase youth's leadership skills.	.847	
% of Variance	47.225	25.167
Cumulative %	47.225	72.392

Perceptions of abstinence education as compatible with existing values were proposed as a latent variable. It was measured using two indicators—personal beliefs and professional beliefs. The factor analysis for the personal and professional beliefs of compatibility showed that all items were loading on the same component for their respective indicators. Tables 7 through 10 show the factor analysis results for compatibility with personal and professional beliefs/values.

Table 7. Final Study: Factor Loadings for Compatibility with Personal Beliefs/Values Expectation Items

	Factor 1
3. How compatible is the following statement with your <u>personal</u> standards?	
Factor 1—Compatibility with Personal Beliefs	
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	.657
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	.729
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	.638
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	.720
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	.710
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	.619
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	.759
h. Attaining self-sufficiency before engaging in sexual activity is important	.605
% of Variance	46.470
Cumulative %	46.470

Table 8. Final Study: Factor Loadings for Compatibility with Personal Beliefs/Values Expectancy Items

	Factor 1
5. How important is it for the following statement to be consistent with your <u>personal</u> standards?	
Factor 1—Compatibility with Personal Beliefs	
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	.770
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	.847
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	.786
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	.820
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	.789
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	.687
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	.798
h. Attaining self-sufficiency before engaging in sexual activity is important	.749
% of Variance	61.151
Cumulative %	61.151

Table 9. Final Study: Factor Loadings for Compatibility with Professional Beliefs/Values Expectation Items

	Factor 1
4. How consistent is the following statement with your <u>professional</u> standards?	
Factor 1—Compatibility with Professional Beliefs	
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	.672
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	.790
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	.687
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	.795
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	.710
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	.663
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	.756
h. Attaining self-sufficiency before engaging in sexual activity is important	.732
% of Variance	52.891
Cumulative %	52.891

Table 10. Final Study: Factor Loadings for Compatibility with Professional Beliefs/Values Expectancy Items

	Factor 1
6. How important is it for the following statement to be compatible with your <u>professional</u> standards?	
Factor 1—Compatibility with Professional Beliefs	
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	.820
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	.878
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	.828
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	.865
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	.819
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	.783
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	.834
h. Attaining self-sufficiency before engaging in sexual activity is important	.779
% of Variance	68.285
Cumulative %	68.285

Tables 11 through 14 show the factor analysis for the attribute items of complexity and observability. Complexity was measured to see if abstinence-only-until-marriage was perceived as difficult to use. The factor analysis for the complexity scale showed that all items were loading on the same component for their respective indicators. The analysis showed that all items for observability were also loading on the expected factors.

Table 11. Final Study: Factor Loadings for Complexity Expectation Items

	Factor 1
7. How easy or difficult is it for you to...	
Factor 1—Complexity Items	
a. Find resources to deliver the abstinence-only-until-marriage education message?	.806
b. Find funding to support the abstinence-only-until-marriage education message?	.723
c. Acquire curriculum to teach abstinence-only-until-marriage education?	.870
d. Find people skilled and capable of promoting the abstinence-only-until-marriage message?	.816
e. Understand policies regarding abstinence-only-until-marriage education?	.709
% of Variance	61.992
Cumulative %	61.992

Table 12. Final Study: Factor Loadings for Complexity Expectancy Items

	Factor 1
8. How important is it for you to be able to...	
Factor 1—Complexity Items	
a. Find resources to deliver the abstinence-only-until-marriage education message?	.939
b. Find funding to support the abstinence-only-until-marriage education message?	.924
c. Acquire curriculum to teach abstinence-only-until-marriage education?	.954
d. Find people skilled and capable of promoting the abstinence-only-until-marriage message?	.945
e. Understand policies regarding abstinence-only-until-marriage education?	.884
% of Variance	86.386
Cumulative %	86.386

Table 13. Final Study: Factor Loadings for Observability Expectation Items

	Factor 1
11. How much do you agree with the following...	
Factor 1—Observability Items	
a. I have seen or heard of other principals in my district adopting abstinence-only-until-marriage education into their school's curriculum.	.823
b. I have seen or heard of other principals in my region adopting abstinence-only-until-marriage education into their school's curriculum.	.924
c. I have seen or heard of other principals across Texas adopting abstinence-only-until-marriage education into their school's curriculum.	.929
d. I have seen or heard of other principals across the nation adopting abstinence-only-until-marriage education into their school's curriculum.	.856
% of Variance	78.172
Cumulative %	78.172

Table 14. Final Study: Factor Loadings for Observability Expectancy Items

	Factor 1
12. Before you consider adopting abstinence-only-until-marriage education, how important is the following...	
Factor 1—Observability Items	
a. I have seen or heard of other principals in my district adopting abstinence-only-until-marriage education into their school's curriculum.	.888
b. I have seen or heard of other principals in my region adopting abstinence-only-until-marriage education into their school's curriculum.	.970
c. I have seen or heard of other principals across Texas adopting abstinence-only-until-marriage education into their school's curriculum.	.965
d. I have seen or heard of other principals across the nation adopting abstinence-only-until-marriage education into their school's curriculum.	.927
% of Variance	87.953
Cumulative %	87.953

The trialability scale showed items loading on two factors (see Table 15). The expectation item for “your school’s curriculum cannot easily incorporate elements of abstinence-only-until-marriage education” loaded on one factor. The other three items—loaded on a different factor—were combined to form the composite trialability scale. The factor analysis for the scale measuring likelihood of adoption also revealed two factors (see Table 16). Items that did not influence the school budget fell within factor one. The two items asking about adoption without funding, or costing the school budget, fell within factor two.

Table 15. Final Study: Factor Loadings for Trialability Items

	Factor	
	1	2
Factor 1—Trialability		
9. How much do you agree with the following...		
a. You school's curriculum can easily incorporate elements of abstinence-only-until-marriage education.	.930	--
b. Your school's curriculum cannot easily incorporate elements of abstinence-only-until-marriage education.	.932	--
10. How important is it that...		
a. You school's curriculum can easily incorporate elements of abstinence-only-until-marriage education.	.579	--
Factor 2—Trialability		
10. How important is it that...		
a. You school's curriculum cannot easily incorporate elements of abstinence-only-until-marriage education.	--	.928
% of Variance	52.178	32.250
Cumulative %	52.178	84.428

Table 16. Final Study: Factor Loadings for the Likelihood of Adopting Abstinence-Only-Until-Marriage Education Items

	Factor	
	1	2
13. How likely are you to...		
Factor 1—Likelihood of Adoption with funding		
a. Apply for a grant to fund abstinence-only-until-marriage in your school.	.881	--
b. Purchase curricula to teach abstinence-only-until-marriage education <i>with</i> grant funding.	.911	--
d. Hire staff/teachers skilled and capable of promoting the abstinence-only-until-marriage message <i>with</i> grant funding.	.764	--
f. Allow a state or federally funded abstinence-only-until-marriage education program to be presented in your school.	.646	--
g. Allow a faith based abstinence-only-until-marriage education program to be presented in your school.	.538	--
Factor 2—Likelihood of Adoption without funding		
c. Purchase curricula to teach abstinence-only-until-marriage education <i>without</i> funding.	--	.878
e. Hire staff/teachers skilled and capable of promoting the abstinence-only-until-marriage message <i>without</i> grant funding.	--	.910
% of Variance	42.364	26.006
Cumulative %	42.364	68.370

Composite Variables

Composite variables were created for analyzing multiple items from their perspective scales. For example, the relative advantage items were separated into two composite variables. Each composite variable was designed to measure the relative advantage from the population-based standpoint, relative advantage from the individual-level perspective, compatibility, trialability, and likelihood of adoption of abstinence education programs.

In the case of relative advantage, two variables were used, but in other cases they were kept in one scale. For compatibility, a decision was made to keep items in one scale due to the high Cronbach's Alpha level (.95) for personal and professional compatibility. For the likelihood of adoption, it was difficult to distinguish and explain the differences between the two factor loadings, so the scale was not split into two variables.

Final Study

The pilot study was conducted in August of 2003. The trialability scale presented low Cronbach's alpha levels, which led to the change of four questions on the survey. For the pilot instrument, the stem for question 9a and 10a was phrased "Abstinence-only-until-marriage education can easily be incorporated into your school's curriculum." On the final survey, it was changed to read, "Your school's curriculum *can* easily incorporate elements of abstinence-only-until-marriage education." The stem for Questions 9b and 10b was changed from "Sexuality education programs, other than abstinence-only-until-marriage programs, can easily be incorporated into your school's curriculum" to "Your school's curriculum *cannot* easily incorporate elements of abstinence-only-until-marriage education." The internal consistency and factorial structure of the rest of the instrument's scales were considered acceptable.

The final study was conducted between September 9, 2003, and November 3, 2003. The 20% response rate from the pilot study supported a need to choose an adequate sample size for the

final study. The goal was to obtain a representative sample of the target population by achieving a 30% response rate.

Sample

Principals of Texas public middle schools were the population of interest for this study. The sample for the final study was selected from the 2003–2004 Texas Education Agency's directory of middle school principals. A random sample of principals (N=904) was chosen.

For a population size of 1105 middle school principals, as reported by the Texas Education Agency, a total sample size of 299 was needed to reach statistical representation with an $\pm 5\%$ error rate at the 95 percent confidence level (with a 50/50 split) (Salant & Dillman, 1994). The random sample of N=904 took into account a response rate of 30%, common for a school administrator population (Dillman, 2000). A proportional sample of middle school principals from each Education Service Center Region was randomly selected using a random numbers calculator (Haahr, 2002). Table 17 shows the number of middle school principals selected and needed from each region. All records from Texas Education Agency for schools currently under construction were eliminated from the sampling frames. If a record showed an incorrect address or principal's name, every effort was made to correct the error.

Data Collection

The final study employed a survey design. The primary investigator had four contacts with the sample population. The first contact was a pre-notice letter sent in late August, notifying participants of their selection for the study (Appendix C) (Dillman, 2000). The second contact was made two weeks later. The first round of surveys was distributed in this second round. The survey packet contained a cover letter (Appendix C), informed consent letter (Appendix C), survey

(Appendix B) and a stamped, pre-addressed envelope. All questionnaires were labeled with a number code for tracking purposes only (Dillman, 2000; Fowler, 2002).

Region	Population of Middle School Principals N (%)	To Be Mailed Out	Sample Size Needed (30% response rate)
I	77 (7.0%)	63	21
II	40 (3.6)	33	11
III	23 (2.1)	19	6
IV	191 (17.3)	155	52
V	31 (2.8)	26	8
VI	47 (4.3)	39	13
VII	66 (6.0)	54	18
VIII	27 (2.4)	22	7
VIV	16 (1.4)	13	4
X	113 (10.2)	92	31
XI	105 (9.5)	86	28
XII	55 (5.0)	45	15
XIII	80 (7.2)	65	22
XIV	22 (2.0)	18	6
XV	16 (1.4)	13	4
XVI	38 (3.4)	31	10
XVII	28 (2.5)	23	8
XVIII	15 (1.4)	13	4
XVIV	29 (2.6)	24	8
XX	86 (7.8)	70	23
Total	1105 (100%)	904	299

All participants received a thank you/reminder postcard approximately one and a half weeks later (Appendix C) (Dillman, 2000). About six weeks after the initial contact, a fourth contact was made to all non-respondents. A second wave of surveys, with a new cover letter (Appendix C), was mailed to those who did not return the original survey, in an effort to increase the response rate (Dillman, 2000; Fowler, 2002).

The four contacts, including two waves of survey mail-outs, resulted in a 48% response rate (394 surveys completed). The researcher tried to assure that all surveys were delivered to principals. If a packet was returned with an unknown address, every effort was made to correct the address and

the packet was mailed again. Some principals declined to participate in the study, resulting in deficient surveys. All surveys returned to the primary investigator were not necessarily complete, but comparisons were made of respondents and non-respondents.

Data Analysis

Data were analyzed using SPSS® (Statistical Package for the Social Sciences version 11.0). Descriptive statistics were used to assess the accuracy of input and the distribution of responses. Prior to analysis, out-of-range values, plausible means, standard deviations, and univariate outliers were checked for accuracy (Gall, et al., 1995; Tabachnick & Fidell, 2001). Concerns for missing data included the pattern of missing data, the extent to which data were missing, and why data were missing (Tabachnik & Fidell, 2001; Allison, 2001). Skewness and kurtosis were used to screen the distribution of responses for normal distribution. Skewness relates to symmetry of the distribution, or a nonsymmetrical curve, and kurtosis deals with the peakedness of frequency distribution (Tabachnik & Fidell, 2001; Vogt, 1999). Correlational techniques were used to study the relationships among variables (Gall, et al., 1995; McDermott & Sarvela, 1999). Factor analysis was used to find the patterns of variation among each scale's items (Vogt, 1999; Tabachnick & Fidell, 2001). Multiple regression analysis was used to examine the interactions among variables (Tabachnick & Fidell, 2001). Further discussion and results of data analysis for this study are presented in Chapter IV.

Chapter III described the research methods applied in this study. The researcher utilized a survey-based, quantitative research study to investigate indicators of adoption and the likelihood of adoption of abstinence-only-until-marriage education programs in Texas middle schools. Participants in the survey were principals representing each of Texas' 20 Education Service Center Regions.

CHAPTER IV

RESULTS

The purpose of this study was to assess indicators of adoption of abstinence-only-until-marriage education as an innovation by middle school principals in the state of Texas. The study also assessed school principals' likelihood of adopting such programs. In order to gain an understanding of relationships among middle school principals' perceived relative advantage, compatibility, complexity, trialability, observability, and the likelihood of principals' adoption of abstinence-only-until-marriage education, the researcher used a variety of quantitative analyses. Results of the statistical analyses are presented in this chapter.

Introduction

Relationships among middle school principals' perceived relative advantage, compatibility, complexity, trialability, observability, and the likelihood of principals' adoption of abstinence-only-until-marriage education were examined in this study. Perceived compatibility was proposed as a latent variable, measured by two indicators: compatibility of abstinence-only-until-marriage with the principal's personal beliefs and with the principal's professional beliefs (Figure 2). Principals from rural or urban areas were tested for having a possible moderating effect upon the dependent and predictor variables.

Descriptive statistics were used to assess the accuracy of input and the distribution of responses (Gall, Borg & Gall, 1995; Tabachnick & Fidell, 2001). Concerns for missing data included the pattern of missing data, the extent to which data were missing, and why data were missing (Tabachnik & Fidell, 2001; Allison, 2001). Skewness and kurtosis were used to screen the distribution of responses for normal distribution (Tabachnik & Fidell, 2001). Correlational techniques were used to study the relationships among variables (Gall, et al., 1995; McDermott & Sarvela, 1999). Factor analysis was used to find patterns of variation among each scale's items

(Vogt, 1999; Tabachnick & Fidell, 2001). Multiple regression analysis was used to examine the interactions among variables (Tabachnick & Fidell, 2001).

Sample

A proportional sample was randomly selected from each Texas Education Service Center Region. In August 2003, there were 1,105 principals in the Texas Education Agency's directory of middle school principals (Texas Education Agency, 2003). The principals selected to receive a survey were chosen using a random numbers calculator (www.random.org). The study's sample size of 433 (394 from final study; 39 from pilot study) reached statistical representation for the population of middle school principals in Texas (Dillman, 2000). To reach statistical representation, a 30% response rate was required. For the surveys used in data analysis, a response rate of 48% was obtained. In addition, representation was achieved for each individual Education Service Center Region. The response rate from each region ranged from 36% to 70% (Table 18).

Missing Data

Prior to analysis, out-of-range values, means, standard deviations and univariate outliers were checked for correctness. Concerns for missing data included the pattern of missing data, the extent to which data were missing and where it was missing (Tabachnik & Fidell, 2001). Any questionnaires that were 50% incomplete were deleted from the study. If missing data were few (less than 5%) and did not seem to be a problem, the items with missing data were left as "missing" because they would not affect the final sample size substantially. (Tabachnick & Fidell, 2001; Allison, 2001). Question 10b had the highest amount of missing data (8%). However, this was not a large concern, because the question was not included in the trialability scale.

Figure 2: Logic Model to Assess Likelihood of Principals Adopting Abstinence-Only-Until-Marriage Education

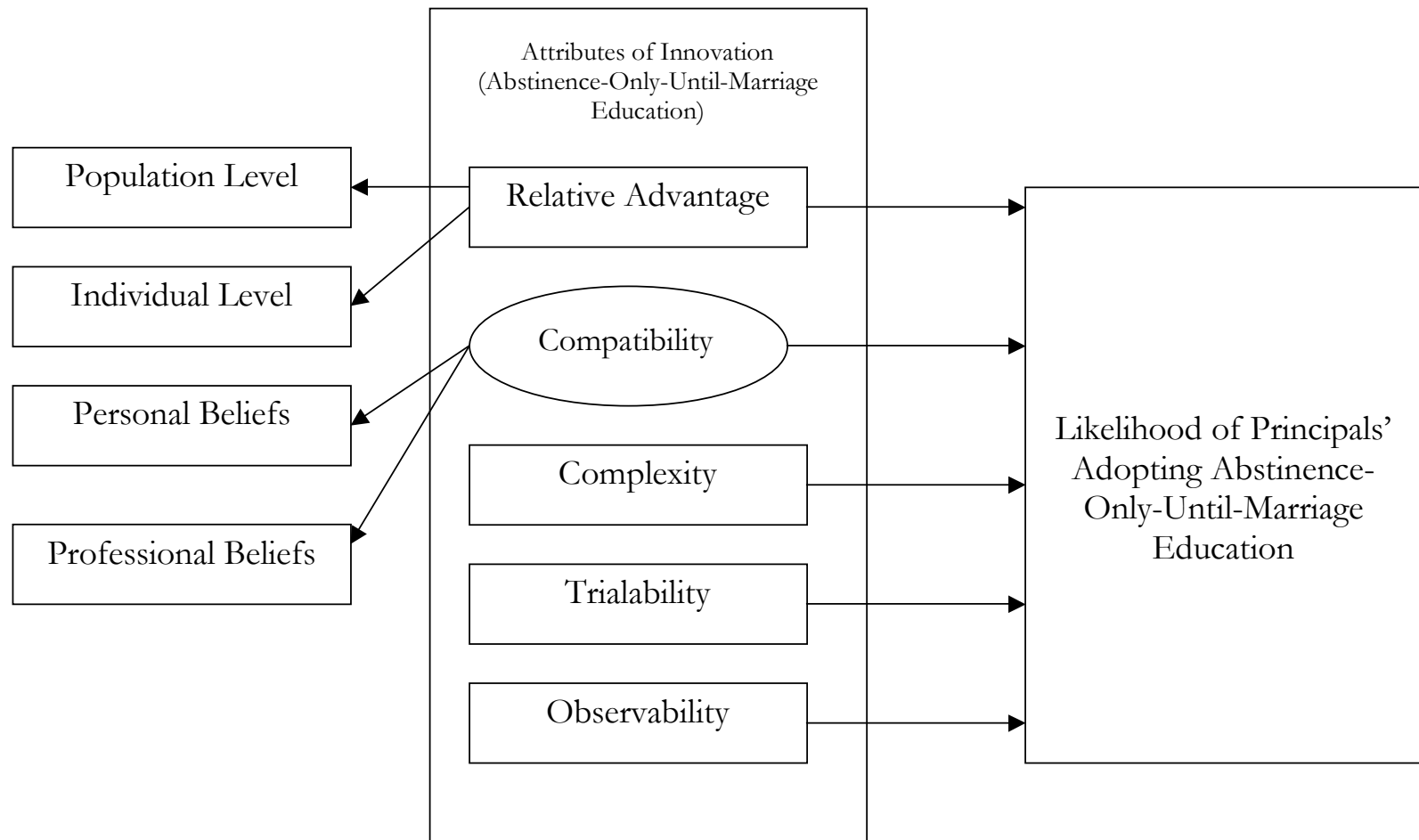


Table 18: Proportional Stratified Sample Obtained from Texas Public Middle School Principals

Region	Population of Middle School Principals N (%)		Sample Size Needed	Sample Size Obtained N (%)	
I	77	(7.0%)	21	27	(6.3%)
II	40	(3.6%)	11	17	(3.9%)
III	23	(2.1%)	6	11	(2.6%)
IV	191	(17.3%)	52	57	(13.2%)
V	31	(2.8%)	8	14	(3.2%)
VI	47	(4.3%)	13	18	(4.2%)
VII	66	(6.0%)	18	31	(7.2%)
VIII	27	(2.4%)	7	10	(2.3%)
VIV	16	(1.4%)	4	7	(1.6%)
X	113	(10.2%)	31	46	(10.7%)
XI	105	(9.5%)	28	42	(9.7%)
XII	55	(5.0%)	15	28	(6.5%)
XIII	80	(7.2%)	22	33	(7.7%)
XIV	22	(2.0%)	6	12	(2.8%)
XV	16	(1.4%)	4	7	(1.6%)
XVI	38	(3.4%)	10	14	(3.2%)
XVII	28	(2.5%)	8	17	(3.9%)
XVIII	15	(1.4%)	4	5	(1.2%)
XVIV	29	(2.6%)	8	10	(2.3%)
XX	86	(7.8%)	23	25	(5.8%)
Total	1105	(100%)	299	433	

Skewness and Kurtosis

Skewness and kurtosis were used to screen the distribution of responses for normal distribution. Skewness relates to the symmetry of the distribution of scores and kurtosis deals with the “peakedness” of distribution. Both indices are useful to examine whether or not scores are normally distributed and, therefore, meet the basic assumption of inferential statistics (Tabachnick & Fidell, 2001). Some of the variables produced slightly positive skewness, but this was intentionally overlooked. With a large sample, “a variable with statistically significant skewness often does not deviate enough from normality to make a substantive difference in the analysis (Tabachnick & Fidell, 2001, p. 74).” Additionally, non-normal kurtosis produces an underestimate of the variance of

a variable. With a sample of 200 or more, the underestimation of variance disappears with kurtosis distribution (Tabachnick & Fidell, 2001, p. 75). For this study, when a kurtosis problem was present it was at a high level; however, because the sample size was over 200, there was no attempt to normalize the kurtosis.

Respondents and Non-Respondents

Of the 504 non-responders, 217 (43.1%) were female and 284 (56.4%) were male. There was no significant difference between respondents and non-respondents in terms of gender (the researcher did not have access to the gender of three of the non-respondents, but these missing data would not, most likely, have changed the comparison). One hundred and five (20.8%) respondents were from rural counties and 398 (79.1%) were from urban counties. However, there was a significant difference between respondents and non-respondents depending on whether they were from rural or urban areas [$F=9.156$, $p=.003$]. Principals in urban counties were more likely to respond than principals in rural counties. There was also a significant difference [$F=1.748$, $p=.001$] in the way African Americans responded versus other ethnicities represented on the survey (White, Hispanic, Asian, and American Indian).

Sample Characteristics

Four hundred thirty-three respondents from the pilot study and the final study were included in the data analysis. Data were combined, given the lack of differences between scores for the two groups and given the proximity in time in which the studies were conducted. The age range for respondents was 25 years of age to 68 years of age (Mean Age= 46.54, $SD=8.18$). The ages were collapsed into four groups for age comparisons: 29 years and younger, 30–39 years, 40–54 years and 65 and older. Almost 65% of the principals were between the ages of 40–54. There were 245 (57.4%) males and 182 (42.6%) females who returned completed surveys (Table 19).

Table 19. Frequency Distribution of Selected Demographic Characteristics of Final Study Participants

Variable	N	%
Gender		
Male	245	57.4%
Female	182	42.6%
Current Age		
29 years and under	4	1.0%
30 years–39 years	75	17.8%
40 years–54 years	273	64.8%
55 years and over	69	16.4%
Mean Age 46.54 (Standard Deviation=8.18)		
Ethnicity		
White	312	73.1%
African American/Black	40	9.4%
Hispanic	65	15.2%
Asian, Oriental, or Pacific Islander	4	0.9%
American Indian	5	1.2%
Years of Principalship at any School		
7 years or less	265	63.7%
8 or more years	151	36.3%
Year Current Principalship Started		
1973–1989	16	4.0%
1990–1999	147	36.5%
2000–2003	239	59.5%

Table 19 also shows the respondents' identified ethnicity. A majority (73%, $n=312$) of respondents were "White." Hispanics (15.2%, $n=65$) represented the next highest ethnic population. African Americans, Asians, and American Indians, combined, represented almost 12% of the population.

Sixty-three percent of the principals reported having been principals for seven years or less. Some started their current principalship in 2003, while one respondent started his or her principalship in 1958. Three hundred and sixty-nine participants identified themselves as middle school principals and seventeen were middle school assistant principals. Other professional

practices identified included school counselors, principals of another grade/school level, and one assistant superintendent. For the participants who did not identify themselves as middle school principals, their data were aggregated with the middle school principal respondents. Table 20 shows how respondents identified their professional practice in the schools.

Table 20: Final Study Respondent's Professional Practice: Middle School Principal, Vice/Assistant Principal or Other		
Title	N	%
Middle School Principal	369	87.2%
Middle School Vice/Assistant Principal	17	4.0%
Other	37	8.8%
Total	423	100.0%

There were 147 counties represented in the study (Texas has 254 total counties). One hundred and twenty-seven (29.5%) of the respondents' counties were located in rural areas and 303 (70.5%) of the respondents' counties were located in urban areas. The Office of Management and Budget defines metropolitan statistical areas, called "urban" in this study, as geographic areas consisting of a large population nucleus, and economically and socially related adjacent communities (Ricketts, Johnson-Webb & Taylor, 1998). For this study, areas that did not meet the "urban" definition provided above were categorized as "rural." A 36% response rate was received from Education Service Center Regions IV (n=57) and XX (n=25). A 40%–49% response rate was obtained from Regions I, VI, VIII, X, XVI, XVIII, XIX. A 50%–59% response rate was acquired from Regions II, V, VII, IX, XI, XIII and XV. A 60–69% response rate was received from Regions III, XII and XIV. The highest response came from Region XVII (n=17) with a 70% response rate.

Existence of Abstinence-Only-Until-Marriage Programs

Participants were asked about the existence of abstinence-only-until-marriage education programs in their schools or school's geographic area (see Table 21). Thirty-one (7%) principals

reported receiving Title V funds to conduct abstinence education in their schools. Forty-eight percent (n=205) of the remaining respondents were not receiving funds and 44% (n=187) did not know if their school received Title V funding. Monies other than Title V funds were reported in 60 (14%) schools, and 145 (34%) principals did not know if they had access to other funds to carry out abstinence education in their schools. Thirty-three (7.8%) principals indicated they had a Title V or Texas Department of Health sponsored program close to them and they used their services. Ten principals (2.4%) indicated they had a Title V or Texas Department of Health sponsored program “close” to them, but they did not utilize their services. Table 21 indicates some participants denoted not having a Title V or Texas Department of Health sponsored program “close” to them, and 355 (84%) did not know if there was a program in the area.

Table 21. Distribution of Responses Indicating the Existence of Abstinence-Only-Until-Marriage Programs in the Participant’s School or Local Area

Question	n	%
Does your school receive Title V abstinence-only-until-marriage education funding from the Texas Department of Health?		
Yes	31	7.3
No	205	48.5
I don’t know	187	44.2
Does your school receive any other abstinence-only-until-marriage education funding?		
Yes	60	14.2
No	218	51.4
I don’t know	145	34.2
Do you know if there is a Title V or Texas Department of Health funded abstinence-only-until-marriage education program close to you?		
Yes, utilize services	33	7.8
Yes, don’t utilize services	10	2.4
No	23	5.5
I don’t know	355	84.3

Final Innovative Decision Maker

Principals were asked to indicate who makes the final adoption decisions for their schools. Response options included the teacher, principal, superintendent, school board, and other. Seven (1.7%) indicated the teacher makes the final decision and 100 (23.9%) revealed they, as principals, make the final decision. The superintendent made the final decision according to 23.6% (n=99) of the respondents, and the school board made the decision in 41.8% (n=175) of the instances. Many respondents indicated a combination of the responses above (for example, the principal and the school board made the final decision together). Some schools' final decision came from a site or campus-based committee, a health advisory committee, or a curriculum director. Respondents wrote comments stating, in many instances, that the final decision maker may vary or it depends on the type of program (Table 22).

Person Making Decision	N	%
Teacher	7	1.7%
Principal	100	23.9%
Superintendent	99	23.6%
School Board	175	41.8%
Other	38	9.1%
Total	419	100.0%

Table 23 shows how respondents answered two questions regarding religion. In developing the survey, the researcher encountered a persistent connection between the promotion of abstinence and issues related to church and state; therefore, it would seem inappropriate to ignore religion-related questions in this study (Kenny & Sternberg, 2003). First, two-thirds (n=279) of respondents indicated they attend religious services at least once a week. About 30% (n=129) sometimes attended services, but not every week. Only 2% (n=10) stated they never attend religious services. When respondents were asked how important religion was to them, 87% (n=365) answered that it

was very important. Almost 12% indicated that religion was a little important, and 1% denoted that it was not important (Table 23).

Table 23. Frequency Distribution of Participant Responses to Religion-Related Questions

Question	n	%
About how often do you go to religious service, for example at a church, temple or mosque? (n=418)		
Never	10	2.4
Sometimes, but not every week	129	30.9
Once a week	184	44.0
More than once a week	95	22.7
How important is religion in your life? (n=419)		
Not important	4	1.0
A little important	50	11.9
Very important	365	87.1

Criterion Variable and Predictor Variables

The criterion variable for this study was the likelihood of principals adopting abstinence-only-until-marriage education, and the predictor variables included principals' perceived relative advantage, compatibility (with personal and professional beliefs), complexity, trialability, and observability. A higher score for the criterion variable indicated a greater likelihood of adopting abstinence-only-until-marriage education. A higher score for the predictor variables indicated a more positive (or stronger) perception of that characteristic and more positive views of abstinence-only-until-marriage education. The mean, Cronbach's Alpha, standard deviation actual range and possible range of scores for the criterion and predictor variables are shown in Table 24. Further descriptive statistics for each of the variables' scales are found later in this chapter.

Table 24. Cronbach's Alpha, Mean, Standard Deviation, Actual Range and Possible Range for Criterion and Predictor Variables							
Variables	Cronbach's Alpha	N	Mean	SD	Actual Range	Possible Range	
Criterion Variable							
Likelihood to Adopt	.82	409	17.56	4.97	7-35	0-35	
Predictor Variables							
Relative Advantage Population	.73	427	43.89	7.88	14-50	0-50	
Relative Advantage Individual	.84	408	94.68	22.14	23-125	0-125	
Compatibility	.95	409	282.39	54.05	67-340	0-800	
Complexity	.86	412	64.34	28.73	10-125	0-125	
Trialability	.81	381	18.7	7.97	2-30	0-30	
Observability	.82	410	39.02	21.17	4-100	0-100	

Descriptive Statistics

Tables 25 through 31 provide descriptive statistics for each scales' designated items. The tables show the frequencies of the responses from the sample of principals. The mean and standard deviation also are reported.

A majority of middle school principals agreed that abstinence-only-until-marriage education provided a relative advantage (see Table 25). First, 98.6% of respondents agreed that reducing the number of unwanted pregnancies and sexually transmitted infections/diseases among youth were relative advantages of abstinence-only-until-marriage education. At least 90% of the principals also

agreed that other advantages of abstinence-only-until-marriage education included that such education could increase youths' self-esteem and decision-making skills. For the remaining items, self-efficacy, communication skills, and leadership skills, approximately 80% of the principals agreed these were advantages of abstinence-only-until-marriage education.

The identified relative advantages of abstinence-only-until-marriage education were "extremely important" or "important" for 98% of respondents or more. For one function of abstinence-only-until-marriage, reducing pregnancy, all (100%) respondents agreed that it was an "extremely important" or "important" advantage (see Table 25).

Table 26 indicates the majority of the middle school principals agreed that the (a)-(h) definition was consistent with their *personal* beliefs. Most respondents "strongly agreed" or "agreed" with the standards identified by the personal beliefs expectation items. The individual item, "attaining self-sufficiency before engaging in sexual activity is important," received the highest disagreement within the personal beliefs expectation scale. Four percent (n=19) of the respondents disagreed with the item.

Table 25: Distribution of Mean Scores for Middle School Principals' Perception of Relative Advantage of Abstinence-Only-Until Marriage Education

1. I believe one of the advantages of abstinence-only-until-marriage education is to...	Mean	SD	Strongly Agree N/(%)	Agree N/(%)	Disagree N/(%)	Strongly Disagree N/(%)	I'm Not Sure N/(%)	Total N
a. Reduce the number of unwanted pregnancies among youth.	1.40	.518	266 (61.6%)	160 (37.0%)	6 (1.4%)	0 (0.0%)	0 (0.0%)	432
b. Reduce the number of sexually transmitted infections/diseases among youth.	1.37	.576	283 (66.0%)	140 (32.6%)	3 (0.7%)	0 (0.0%)	3 (0.7%)	429
c. Increase youth's self esteem.	1.70	.666	168 (39.3%)	224 (52.5%)	32 (7.5%)	0 (0.0%)	3 (0.7%)	427
d. Increase youth's self-efficacy.	1.80	.652	133 (31.8%)	240 (57.4%)	43 (10.3%)	0 (0.0%)	2 (0.5%)	418
e. Increase youth's communication skills.	2.02	.728	81 (19.0%)	273 (63.9%)	64 (15.0%)	0 (0.0%)	9 (2.1%)	427
f. Increase youth's decision- making skills.	1.64	.722	196 (45.9%)	199 (46.6%)	26 (6.1%)	0 (0.0%)	6 (1.4%)	427
g. Increase youth's leadership skills.	1.93	.772	117 (27.4%)	243 (56.9%)	58 (13.6%)	0 (0.0%)	9 (2.1%)	427
Cronbach's Alpha = .87								
2. How important is it for you to be able to...	Mean	SD	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Importa nt At All N/(%)	I'm Not Sure N/(%)	Total N
a. Reduce the number of unwanted pregnancies among youth.	1.23	.418	334 (77.5%)	97 (22.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	431
b. Reduce the number of sexually transmitted infections/diseases among youth.	1.19	.434	356 (82.6%)	72 (16.7%)	2 (0.5%)	0 (0.0%)	1 (0.2%)	431
c. Increase youth's self esteem.	1.28	.457	308 (71.8%)	120 (28.0%)	1 (0.2%)	0 (0.0%)	0 (0.0%)	429
d. Increase youth's self-efficacy.	1.39	.547	269 (63.6%)	146 (34.5%)	17 (1.7%)	0 (0.0%)	1 (0.2%)	423
e. Increase youth's communication skills.	1.43	.86	259 (60.2%)	165 (38.4%)	3 (0.7%)	0 (0.0%)	3 (0.7%)	340
f. Increase youth's decision- making skills.	1.21	.440	344 (79.8%)	86 (20.0%)	0 (0.0%)	0 (0.0%)	1 (0.2%)	431
g. Increase youth's leadership skills.	1.37	.554	283 (65.7%)	142 (32.9%)	4 (0.9%)	0 (0.0%)	2 (0.5%)	431
Cronbach's Alpha = .85								
Cronbach's Alpha for 1&2 combined = .87								

Table 26: Distribution of Mean Scores for Middle School Principals' Perception of Compatibility of Abstinence-Only-Until-Marriage with Personal Standards

3. How compatible is the following statement with your personal standards?	Mean	SD	Strongly Agree N/(%)	Agree N/(%)	Disagree N/(%)	Strongly Disagree N/(%)	I'm Not Sure N/(%)	Total N
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	1.50	.590	231 (53.7%)	183 (42.6%)	15 (3.5%)	0 (0.0%)	1 (0.2%)	430
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	1.40	.585	273 (63.3%)	151 (35.0%)	4 (0.9%)	0 (0.0%)	3 (0.7%)	431
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	1.41	.685	284 (65.9%)	133 (30.9%)	7 (1.6%)	0 (0.0%)	7 (1.6%)	431
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	1.44	.647	263 (60.9%)	157 (36.3%)	7 (1.6%)	0 (0.0%)	5 (1.2%)	432
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	1.70	.784	187 (43.5%)	201 (46.7%)	33 (7.7%)	0 (0.0%)	9 (2.1%)	430
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	1.52	.605	230 (53.2%)	182 (42.1%)	19 (4.4%)	0 (0.0%)	1 (0.2%)	432
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	1.33	.475	291 (67.5%)	139 (32.3%)	1 (0.2%)	0 (0.0%)	0 (0.0%)	431
h. Attaining self-sufficiency before engaging in sexual activity is important.	1.51	.606	233 (54.2%)	177 (41.2%)	19 (4.4%)	0 (0.0%)	1 (0.2%)	430
Cronbach's Alpha = .82								

Table 26: Continued

5. How important is it for the following statement to be consistent with your personal standards?	Mean	SD	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	1.54	.614	214 (50.5%)	198 (46.7%)	9 (2.1%)	0 (0.0%)	3 (0.7%)	424
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	1.44	.615	255 (60.0%)	162 (38.1%)	4 (0.9%)	0 (0.0%)	4 (0.9%)	425
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	1.44	.642	260 (61.3%)	149 (35.1%)	11 (2.6%)	0 (0.0%)	4 (0.9%)	424
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	1.49	.666	243 (57.2%)	166 (39.1%)	11 (2.6%)	0 (0.0%)	5 (1.2%)	425
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	1.61	.745	209 (49.4%)	182 (43.0%)	25 (5.9%)	0 (0.0%)	7 (1.7%)	423
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	1.48	.663	247 (58.3%)	157 (37.0%)	16 (3.8%)	0 (0.0%)	4 (0.9%)	424
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	1.37	.525	274 (64.5%)	147 (34.6%)	3 (0.7%)	0 (0.0%)	1 (0.2%)	425
h. Attaining self-sufficiency before engaging in sexual activity is important.	1.53	.633	227 (53.4%)	176 (41.4%)	20 (4.7%)	0 (0.0%)	2 (0.5%)	425
Cronbach's Alpha = .90								
Cronbach's Alpha for 3&5 combined = .92								

Ninety-two percent of respondents felt the personal belief expectancy items were “extremely important” or “important.” The items respondents found least important in terms of being compatible with personal beliefs were “sexual activity outside the context of marriage is likely to have harmful psychological and physical effects” (6%) and “bearing children out-of-wedlock is likely to have harmful consequences for the child, the child’s parents, and society” (4%).

A majority of respondents felt abstinence-only-until-marriage education was consistent with both their *professional* and *personal* beliefs. Table 27 indicates almost half of the respondents “strongly agreed” the items were compatible with their professional beliefs and values and felt they were “very important.” Five percent of principals “disagreed” with the statement “sexual activity outside the context of marriage is likely to have harmful psychological and physical effects” and 4% “disagreed” that the statement “attaining self-sufficiency before engaging in sexual activity is important” was compatible with their professional beliefs/values. The expectancy items “sexual activity outside the context of marriage is likely to have harmful psychological and physical effects” and “attaining self-sufficiency before engaging in sexual activity is important” had similar responses (5%, 4%, respectively).

Complexity was measured to find out how the innovation (abstinence-only-until-marriage education) is seen as difficult to understand and to use. Over 90% of principals felt that it was important to locate a variety of sources to implement abstinence-only-until-marriage education. However, 15% of respondents felt it was “somewhat difficult” or “very difficult” for them to find resources, and about 20% felt it was “somewhat difficult” or “very difficult” to find funding or acquire curricula to promote the abstinence message (see Table 28).

Table 27: Distribution of Mean Scores for Middle School Principals' Perception of Compatibility of Abstinence-Only-Until-Marriage Education with Professional Standards

4. How consistent is the following statement with your professional standards?	Mean	SD	Strongly Agree N/(%)	Agree N/(%)	Disagree N/(%)	Strongly Disagree N/(%)	I'm Not Sure N/(%)	Total N
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	1.43	.562	257 (59.5%)	165 (38.2%)	9 (2.1%)	0 (0.0%)	1 (0.2%)	432
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	1.39	.606	284 (65.9%)	134 (31.1%)	10 (2.3%)	0 (0.0%)	3 (0.7%)	431
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	1.39	.644	288 (66.8%)	130 (30.2%)	8 (1.9%)	0 (0.0%)	5 (1.2%)	431
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	1.48	.643	247 (57.4%)	168 (39.1%)	11 (2.6%)	0 (0.0%)	4 (0.9%)	430
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	1.61	.729	211 (49.0%)	192 (44.5%)	21 (4.9%)	0 (0.0%)	7 (1.6%)	431
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	1.43	.574	260 (60.2%)	159 (36.8%)	12 (2.8%)	0 (0.0%)	1 (0.2%)	432
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	1.29	.476	308 (71.5%)	119 (27.6%)	4 (0.9%)	0 (0.0%)	0 (0.0%)	431
h. Attaining self-sufficiency before engaging in sexual activity is important.	1.47	.601	250 (58.0%)	162 (37.6%)	18 (4.2%)	0 (0.0%)	1 (0.2%)	431
Cronbach's Alpha = .86								

Table 27: Continued

6. How important is it for the following statement to be consistent with your professional standards?	Mean	SD	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	1.50	.638	235 (55.4%)	176 (41.5%)	9 (2.1%)	0 (0.0%)	4 (0.9%)	424
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	1.45	.639	257 (60.6%)	153 (36.1%)	10 (2.4%)	0 (0.0%)	4 (0.9%)	424
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	1.45	.653	262 (61.5%)	146 (34.3%)	14 (3.3%)	0 (0.0%)	4 (0.9%)	426
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	1.50	.666	238 (55.9%)	172 (40.4%)	11 (2.6%)	0 (0.0%)	5 (1.2%)	426
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	1.61	.717	207 (48.9%)	188 (44.4%)	22 (5.2%)	0 (0.0%)	6 (1.4%)	423
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	1.49	.645	242 (57.1%)	162 (38.2%)	17 (4.0%)	0 (0.0%)	3 (0.7%)	424
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	1.37	.560	279 (65.6%)	139 (32.7%)	5 (1.2%)	0 (0.0%)	2 (0.5%)	425
h. Attaining self-sufficiency before engaging in sexual activity is important.	1.52	.673	233 (54.8%)	169 (39.8%)	19 (4.5%)	0 (0.0%)	4 (0.9%)	425
Cronbach's Alpha = .93								
Cronbach's Alpha for 4&6 combined = .94								

Table 28: Distribution of Mean Scores for Middle School Principals' Perception of Complexity of Abstinence-Only-Until-Marriage Education

7. How easy or difficult is it for you to...	Mean	SD	Very Easy N/(%)	Somewhat Easy N/(%)	Somewhat Difficult N/(%)	Very Difficult N/(%)	I'm Not Sure N/(%)	Total N
a. Find resources to deliver the abstinence-only-until-marriage education message?	2.25	1.054	75 (17.7%)	247 (58.3%)	62 (14.6%)	0 (0.0%)	40 (9.4%)	424
b. Find funding to support the abstinence-only-until-marriage message?	2.66	1.199	31 (7.3%)	232 (54.8%)	85 (20.1%)	0 (0.0%)	75 (17.7%)	423
c. Acquire curriculum to teach abstinence-only-until-marriage education?	2.33	1.033	59 (13.9%)	248 (58.5%)	77 (18.2%)	0 (0.0%)	40 (9.4%)	424
d. Find people skilled and capable of promoting the abstinence-only-until-marriage message?	2.40	1.186	66 (15.6%)	240 (56.7%)	57 (13.5%)	0 (0.0%)	60 (14.2%)	423
e. Understand policies regarding abstinence-only-until-marriage education?	2.08	.926	95 (22.6%)	242 (57.5%)	61 (14.5%)	0 (0.0%)	23 (5.5%)	421
Cronbach's Alpha = .85								
8. How important is it for you to be able to...	Mean	SD	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. Find resources to deliver the abstinence-only-until-marriage education message?	1.77	.835	162 (38.4%)	226 (53.6%)	19 (4.5%)	0 (0.0%)	15 (3.6%)	422
b. Find funding to support the abstinence-only-until-marriage message?	1.78	.854	165 (39.2%)	214 (50.8%)	27 (6.4%)	0 (0.0%)	15 (3.6%)	421
c. Acquire curriculum to teach abstinence-only-until-marriage education?	1.80	.853	156 (36.9%)	227 (53.7%)	24 (5.7%)	0 (0.0%)	16 (3.8%)	423
d. Find people skilled and capable of promoting the abstinence-only-until-marriage message?	1.71	.854	188 (44.5%)	199 (47.2%)	20 (4.7%)	0 (0.0%)	15 (3.6%)	422
e. Understand policies regarding abstinence-only-until-marriage education?	1.69	.839	192 (45.5%)	197 (46.7%)	19 (4.5%)	0 (0.0%)	14 (3.3%)	422
Cronbach's Alpha = .96								
Cronbach's Alpha for 7&8 = .86								

The n for the trialability scale (n=394) was slightly smaller than the total N for the study. The items presented on the pilot study instrument were changed for the final instrument, and the data for these items from the pilot study could not be incorporated into the final study data. The results from the final study, shown in Table 29, revealed 80% of the principals agreed that abstinence-only-until-marriage education could easily be incorporated into their schools' curricula. Even more (90%) felt incorporating abstinence education "easily" was "extremely important" or "important."

Table 30 indicates respondents' perceived observability of abstinence-only-until-marriage education programs. Over two-thirds of the respondents agreed their colleagues, more so at the state level, were adopting abstinence-only-until-marriage education into their schools' curricula. However, approximately 25% of principals disagreed that other principals were incorporating abstinence education at the district, region, state and national levels. Still, many (80%) felt it was "important" to observe what other colleagues were accepting and adopting into their schools' curricula (Table 30).

Table 31 shows the likelihood of principals adopting abstinence-only-until-marriage education into their schools' curricula. This table indicates 3% of principals did apply for a grant, purchase abstinence curricula (without additional funding), and hire staff capable of promoting the abstinence message. In spite of this, many respondents (over half) were not likely to do these things. First, respondents with funding (54%) versus without funding (33%) were more likely to purchase curricula. For the scenarios presented, principals were most likely to allow state or federally funded programs to be offered and presented in their schools (72.3%, n=301). On the other hand, almost 70% were not likely to hire staff without additional funding or allow a faith-based program to present in their school. Table 32 shows different elements of abstinence education that principals already incorporated into their schools.

Table 29: Distribution of Mean Scores for Middle School Principals' Perception of Trialability of Abstinence-Only-Until-Marriage Education

9. How much do you agree with the following...	Mean	SD	Strongly Agree N/(%)	Agree N/(%)	Disagree N/(%)	Strongly Disagree N/(%)	I'm Not Sure N/(%)	Total N
a. Abstinence-only-until-marriage education can easily be incorporated into your school's curriculum.	2.11	.943	91 (21.3%)	251 (58.6%)	60 (14.0%)	0 (0.0%)	26 (6.1%)	428
b. Your school's curriculum cannot easily incorporate elements of abstinence-only-until-marriage education.	3.43	1.236	31 (7.3%)	89 (20.9%)	61 (14.4%)	154 (36.2%)	90 (21.2%)	425
Cronbach's Alpha = .88								
10. How important is it that...	Mean	SD	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. Abstinence-only-until-marriage education can easily be incorporated into your school's curriculum.	1.78	.737	147 (34.7%)	238 (56.1%)	31 (7.3%)	0 (0.0%)	8 (1.9%)	424
b. Your school's curriculum cannot easily incorporate elements of abstinence-only-until-marriage education.	2.76	1.283	70 (17.5%)	131 (32.8%)	69 (17.3%)	84 (21.0%)	46 (11.5%)	400
Cronbach's Alpha ---								
Cronbach's Alpha for 9a, 9b&10a = .81								

Table 30: Distribution of Mean Scores for Middle School Principals' Perception of Observability of Abstinence-Only-Until-Marriage Education

11. How much do you agree with the following...	Mean	SD	Strongly Agree N/(%)	Agree N/(%)	Disagree N/(%)	Strongly Disagree N/(%)	I'm Not Sure N/(%)	Total N
a. I have seen or heard of other principals in my district adopting abstinence-only-until-marriage education into their school's curriculum.	2.45	1.106	56 (13.4%)	215 (51.6%)	97 (23.3%)	0 (0.0%)	49 (11.8%)	417
b. I have seen or heard of other principals in my region adopting abstinence-only-until-marriage education into their school's curriculum.	2.45	1.023	44 (10.5%)	223 (53.2%)	111 (26.5%)	0 (0.0%)	41 (9.8%)	419
c. I have seen or heard of other principals across Texas adopting abstinence-only-until-marriage education into their school's curriculum.	2.40	.928	36 (8.6%)	241 (57.8%)	109 (26.1%)	0 (0.0%)	31 (7.4%)	417
d. I have seen or heard of other principals across the nation adopting abstinence-only-until-marriage education into their school's curriculum.	2.41	.932	37 (8.9%)	235 (56.5%)	113 (27.2%)	0 (0.0%)	31 (7.5%)	416
Cronbach's Alpha = .90								
12. Before you consider adopting abstinence-only-until-marriage education, how important is the following...	Mean	SD	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. I have seen or heard of other principals in my district adopting abstinence-only-until-marriage education into their school's curriculum.	2.14	1.026	82 (19.8%)	267 (64.5%)	28 (6.8%)	0 (0.0%)	37 (8.9%)	414
b. I have seen or heard of other principals in my region adopting abstinence-only-until-marriage education into their school's curriculum.	2.26	1.041	55 (13.3%)	283 (68.4%)	33 (8.0%)	0 (0.0%)	43 (10.4%)	414
c. I have seen or heard of other principals across Texas adopting abstinence-only-until-marriage education into their school's curriculum.	2.30	1.058	49 (11.9%)	283 (68.5%)	35 (8.5%)	0 (0.0%)	46 (11.1%)	413
d. I have seen or heard of other principals across the nation adopting abstinence-only-until-marriage education into their school's curriculum.	2.35	1.103	47 (11.4%)	278 (67.6%)	34 (8.3%)	0 (0.0%)	52 (12.7%)	411
Cronbach's Alpha = .95								
Cronbach's Alpha for 11&12 = .82								

Table 31: Distribution of Mean Scores for Middle School Principals' Likelihood of Adoption of Abstinence-Only-Until-Marriage Education

13. How likely are you to...	Mean	SD	Extremely Likely N/(%)	Somewhat Likely N/(%)	Not Likely N/(%)	Not Likely At All N/(%)	I Already Do N/(%)	Total N
a. Apply for a grant to fund abstinence-only-until-marriage education in your school.	2.52	.939	34 (8.1%)	158 (37.7%)	153 (36.5%)	62 (14.8%)	12 (2.9%)	419
b. Purchase curricula to teach abstinence-only-until-marriage education <i>with</i> grant funding.	2.33	1.009	70 (16.6%)	160 (38.0%)	120 (28.5%)	58 (13.8%)	13 (3.1%)	421
c. Purchase curricula to teach abstinence-only-until-marriage education <i>without</i> grant funding.	2.67	1.000	22 (5.2%)	115 (27.3%)	182 (43.2%)	82 (19.5%)	20 (4.8%)	421
d. Hire staff/teachers skilled and capable of promoting the abstinence-only-until-marriage message <i>with</i> grant funding.	2.48	1.055	68 (16.2%)	128 (30.4%)	134 (31.8%)	80 (19.0%)	11 (2.6%)	421
e. Hire staff/teachers skilled and capable of promoting the abstinence-only-until-marriage message <i>without</i> grant funding.	2.76	1.119	29 (6.9%)	80 (19.1%)	167 (39.9%)	117 (27.9%)	26 (6.2%)	419
f. Allow a state or federally funded abstinence-only-until-marriage education program be presented in your school.	1.86	1.006	124 (29.8%)	177 (42.5%)	52 (12.5%)	35 (8.4%)	28 (6.7%)	416
g. Allow a faith based abstinence-only-until-marriage education program be presented in your school.	2.83	.985	37 (9.0%)	93 (22.5%)	161 (39.0%)	116 (28.1%)	6 (1.5%)	413
Cronbach's Alpha = .82								

Table 32. Number of Middle School Principals Already Incorporating Elements of Abstinence-Only-Until-Marriage Education Programs into Their Schools' Curricula

Abstinence Element	N	Number of Principals
Applied for a grant	419	12
Purchased Curricula <i>with</i> grant funding	421	13
Purchased Curricula <i>without</i> grant funding	421	20
Hired Staff/teachers with grant funding	421	11
Hired staff/teachers without grant funding	419	26
Allowed state or federally funded abstinence program to present in their school	416	28
Allowed a faith based abstinence program to present in their school	413	6
Total		116

Analysis of Variance

A series of one-way ANOVAs were used to compare the means of the predictor and criterion variables and selected demographic variables to check for differences among groups. Demographic variables included age, gender, rural versus urban county, and how long the respondent had been a principal. Tables 33 through 35 provide the results of the ANOVA.

The results of the one-way ANOVA indicated there was a significant difference for gender in the observability scores [$F=4.326, p=.038$]. Because a higher score indicated higher amounts of observation of abstinence education being implemented, females ($M=41.64, SD=22.08$) perceived their colleagues adopting abstinence education at a higher rate compared to males ($M=37.22, SD=20.44$) (see Table 33). A significant difference was also revealed between the likelihood of adoption and two age groups [$F=3.179, p=.024$]: 30–39 years of age ($M=18.77, SD=5.15$) and 55 years and over ($M=16.40, SD=4.40$). Respondents within these two age ranges were more likely to adopt abstinence-only-until-marriage education into their schools' curricula than those in the 29 years and under age group and the 40–54 years age group.

There was a significant difference between the likelihood of adoption among the rural and urban groups ($F=14.316, p<.001$). The rural group ($M=18.95, SD=4.50$) obtained significantly higher scores for likelihood of adoption than the urban group ($M=16.95, SD=5.05$). A higher score on this item indicated a stronger likelihood of adoption; therefore, the rural group had a higher likelihood of adoption. ANOVA analysis revealed no significant differences between how long a respondent had been a principal and perceived attributes of the innovation.

A Bonferroni post hoc analysis was conducted for each of the one-way ANOVAs. Significance presented in the tables or the text was conducted with alphas set at a .05 and .01 level. Cohen's d was used to measure the magnitude of the significant differences, or effect sizes: $D = (M_1 - M_2) / \sigma$ (Becker, 1999).

Mean scores and effect sizes are presented for selected demographic variables on proposed variables in Tables 33 through 35.

Table 33. Mean Scores and Effect Size of Mean Differences for Rural Area and Urban Area Middle School Principals on Predictor and Criterion Variables

Variable	Total Sample	Rural Area	Urban Area	F(1 <i>df</i>)	<i>p</i>	Effect Size ^a
Relative Advantage: Population	43.88	43.80	43.91	.018	.894	.01
Relative Advantage: Individual	94.61	95.07	94.42	.073	.787	.03
Personal Beliefs	139.67	142.64	138.39	1.997	.158	.16
Professional Beliefs	142.58	144.03	141.96	.442	.507	.07
Complexity	64.18	62.29	65.02	.784	.376	.10
Triability	18.19	19.00	17.85	1.642	.201	.15
Observability	38.92	39.04	38.87	.006	.939	.01
Likelihood to Adopt	17.56	18.95	16.95	14.316	.000**	.42

a. Effect size measure is in standardized units.

** $p < .001$.

Table 34. Mean Scores and Effect Size of Mean Differences for Length of Principalship on Predictor and Criterion Variables

Variable	Total Sample	7 years or less	More than 7	F(1 <i>df</i>)	<i>p</i>	Effect Size ^a
Relative Advantage: Population	7.91	7.68	8.31	.658	.418	.08
Relative Advantage: Individual	22.02	21.84	22.39	.034	.854	.02
Personal Beliefs	28.09	23.36	29.38	.923	.337	.10
Professional Beliefs	28.87	29.19	28.39	.022	.883	.02
Complexity	28.46	28.04	29.29	.115	.735	.04
Triability	7.96	7.89	8.11	.337	.562	.06
Observability	21.12	20.21	22.69	.168	.628	.04
Likelihood to Adopt	4.98	4.76	5.30	3.618	.058	.19

a. Effect size measure is in standardized units.

** $p < .001$.

Table 35. Mean Scores and Effect Size of Mean Differences for Gender on Predictor and Criterion Variables

Variable	Total Sample	Male	Female	F(1 <i>df</i>)	<i>p</i>	Effect Size ^a
Relative Advantage: Population	43.91	43.62	44.31	.780	.378	.09
Relative Advantage: Individual	94.79	93.57	96.44	1.654	.199	.13
Personal Beliefs	139.71	139.01	140.69	.358	.550	.06
Professional Beliefs	142.75	143.24	142.07	.165	.685	.04
Complexity	64.11	63.33	65.19	.422	.516	.08
Trialability	18.18	18.47	17.77	.718	.397	.09
Observability	39.06	37.22	41.64	4.326	.038**	.21
Likelihood to Adopt	17.59	17.72	17.40	.412	.521	.06

a. Effect size measure is in standardized units.

** $p < .001$.

Multicollinearity and Linearity

The sample was screened for potential problems with multicollinearity, using a Pearson product-moment correlation of the predictor variables (Tabachnick & Fidell, 2001). Pearson correlation was used to measure the strength and the direction of the linear relationships between the variables. Multicollinearity was not detected in the correlation matrix. None of the associations were stronger than .620. All the relationships were significant at the .05 and the .01 levels. Table 36 shows the results of the zero-order correlations. The results indicated the criterion variable, likelihood of adopting abstinence-only-until-marriage education, was related to all of the predictor variables in the model.

Table 36. Pearson Zero-Order Correlations among Predictor and Criterion Variables							
Variables	CV	P1	P2	P3	P4	P5	P6
Predictor Variables							
P1 Relative Advantage Population (1)	.246**						
P2 Relative Advantage Individual (2)	.336**	.499**					
P3 Compatibility with Personal and Professional Beliefs	.315**	.540**	.576**				
P4 Complexity	.481**	.290**	.300**	.372**			
P5 Trialability	.541**	.257**	.306**	.392**	.620**		
P6 Observability	.304**	.181**	.294**	.237**	.355**	.331**	
Criterion Variable							
CV Likelihood to Adopt		.246**	.336**	.315**	.481**	.541**	.304**

**Correlation is significant at the 0.01 level

PV=Predictor Variables

CV=Criterion Variable (Likelihood of Adoption)

Prediction of Likelihood of Middle School Principals Adopting Abstinence Education

Multiple regression analysis was performed to analyze the data and search for predictive associations (Tabachnick & Fidell, 2001). The likelihood of adoption of abstinence-only-until-marriage education by middle school principals was the dependent variable. Demographic variables (the interaction of rural/urban counties and age, and religion) as well as perceived relative advantage, compatibility, complexity, trialability, and observability were independent variables.

Table 37 presents a series of multiple regression models. The models estimate the effects of the perceived characteristics of abstinence education on the likelihood of adoption. Model 1 shows the likelihood of adoption as a function of demographic factors, exclusively. In Model 2, the interaction of rural/urban counties and age is added as a predictor. Religion is added as a predictor in Model 3. Models 4 and 5 contain relative advantage as predictor variables, from the population and individual perspective. Model 6 includes compatibility and Model 7 includes complexity as predictors. Trialability and observability are included as predictors in Models 8 and 9.

Two of the demographic variables, age and rural/urban counties, are significant predictors of the likelihood to adopt abstinence education in Model 1. People ages 30 years to 39 years and 55 years or older living in rural areas are most likely to adopt. The interaction of rural/urban counties and age, added in Model 2, acts a suppressor variable, eliminating independent effects of age and rural/urban location in association with the likelihood to adopt abstinence-only-until-marriage education. In Model 3, religion is added as a predictor variable. Throughout the remaining five models, religion maintains its significant association with likelihood to adopt abstinence education. However, as each perceived characteristic is added to the regression, religion's significance is slightly affected by other variables.

In Model 4, relative advantage, from the population perspective, was associated with the likelihood to adopt abstinence education. Relative advantage, from the individual level, is a predictor in Model 5 and maintains its prediction through Model 8. Complexity maintains its

prediction in Model 7 through Model 9. In Models 8 and 9, trialability is a predictor. However, when observability is added in Model 9, trialability is not seen as a predictor of the likelihood to adopt abstinence education.

In the final model, Model 9, religion, complexity, and trialability were shown as predictors for middle school principals' likelihood of adopting abstinence education. Therefore, when controlling for demographics, religious preferences and behavior, and the perceptions of the attributes of abstinence as an innovation, only the respondents' religious beliefs/practices, and the complexity and trialability of abstinence education remained significantly associated with the dependent variable, likelihood to adopt abstinence education.

This study explores principal's indicators and likelihood of adoption of abstinence-only-until-marriage education in the state of Texas. Results of data analysis conducted by the researcher are presented here, offering an increased understanding on these phenomena.

Table 37. Metric and Standardized Beta Coefficients for Predictors of Likelihood of Middle School Principals Adopting Abstinence-Only-Until-Marriage Education, According to Nine Different Regression Models

Predictor	Model 1			Model 2			Model 3		
	Adjusted R ² =.050			Adjusted R ² =.048			Adjusted R ² =.091		
	B	β	P	B	β	p	B	β	p
Constant	30.850		.010	31.203		.009	20.785		.088
Gender	-.376	-.038	.467	-.370	-.037	.474	-.261	-.026	.606
Age	-.991	-.124	.022	-.591	-.074	.629	-.504	-.063	.673
Time of Principalship	-.155	-.015	.780	-.169	-.017	.760	-7.412E-02	-.007	.892
White	.203	.018	.898	.175	.016	.913	1.064	.096	.515
Black	-1.115	-.066	.519	-1.152	-.068	.507	.0534	.032	.763
Hispanic	.211	.015	.902	.180	.013	.916	.737	.054	.674
Asian	-1.569	-.028	.597	-1.490	-.026	.617	-2.742	-.049	.348
American Indian	-.912	-.019	.720	-1.926	-.019	.716	.598	.012	.811
Rural/Urban	-1.722	-.162	.005	-2.313	-.217	.198	-1.825	-.172	.298
Principal/Not Principal	-2.213	-.017	.175	-2.146	-.069	.192	-1.840	-.060	.250
Region	-1.102E-02	-.012	.817	-1.102E-02	-.011	.832	-1.068E-02	-.012	.820
School Size	-.401	-.093	.113	-.400	-.093	.115	-.311	-.072	.209
Interaction Rural/Urban				-.304	-.076	.726	-.383	-.096	.650
Religion							.420	.233	.000
Relative Advantage Population									
Relative Advantage Individual									
Compatibility									
Complexity									
Trialability									
Observability									

*p<.05

**p<.01

Table 37: Continued

Predictor	Model 4			Model 5			Model 6		
	Adjusted R ² =.142			Adjusted R ² =.188			Adjusted R ² =.194		
	B	β	P	B	β	p	B	β	p
Constant	-11.167		.586	-10.101		.617	-3.874		.049
Gender	-.393	-.040	.427	-.564	-.056	.262	-.359	-.036	.481
Age	-.655	-.083	.571	-.587	-.074	.612	-1.113	-.141	.341
Time of Principalship	-4.628E-02	-.005	.930	-.263	-.026	.622	-.284	-.028	.597
White	3.333	.301	.124	3.038	.272	.154	2.695	.242	.205
Black	3.057	.178	.188	2.807	.163	.220	2.032	.118	.377
Hispanic	2.845	.209	.209	2.855	.209	.201	2.471	.181	.269
Asian	2.027	.303	.605	1.372	.021	.722	.111	.002	.977
American Indian	3.393	.016	.261	3.449	.063	.245	2.554	.048	.392
Rural/Urban	-1.860	-.176	.274	-1.670	-.157	.330	-.986	-.093	.568
Principal/Not Principal	-.1575	-.052	.313	-1.839	-.061	.234	-1.921	-.062	.229
Region	-2.773E-03	-.003	.952	-1.886E-02	-.020	.682	-1.336E-02	-.015	.773
School Size	-.317	-.074	.191	-.337	-.078	.165	-.382	-.098	.124
Interaction Rural/Urban	-.325	-.082	.692	-.174	-.043	.833	.158	.039	.850
Religion	.382	.212	.000	.333	.183	.000	.306	.170	.001
Relative Advantage Population	.127	.200	.000	3.633E-02	.056	.308	2.826E-03	.004	.942
Relative Advantage Individual				5.854E-02	.262	.000	4.757E-02	.215	.001
Compatibility							1.062E-02	.117	.072
Complexity									
Trialability									
Observability									
*p<.05	**p<.01								

Table 37: Continued

Predictor	Model 7 Adjusted R ² =.335			Model 8 Adjusted R ² =.416			Model 9 Adjusted R ² =.412		
	B	β	P	B	β	p	B	β	p
Constant	.437		.981	1.579		.929	2.235		.900
Gender	-.354	-.035	.453	-.181	-.018	.706	-.249	-.024	.611
Age	-1.981	-.252	.067	-1.993	-.254	.060	-2.055	-.262	.056
Time of Principalship	-.225	-.022	.648	-.415	-.040	.405	-.450	-.044	.371
White	2.150	.228	.194	1.002	.090	.595	.898	.081	.634
Black	1.817	.107	.385	.999	.057	.627	1.018	.057	.621
Hispanic	2.369	.176	.244	1.046	.078	.597	.958	.072	.629
Asian	-.590	-.009	.868	-1.543	-.025	.649	-1.252	-.020	.713
American Indian	1.450	.028	.592	4.135	.067	.164	3.588	.058	.232
Rural/Urban	-5.968E-02	-.006	.970	.814	.076	.601	.969	.090	.539
Principal/Not Principal	-1.948	-.060	.204	-2.506	-.080	.089	-2.645	-.085	.074
Region	-6.079E-02	-.067	.162	-5.775E-02	-.064	.175	-6.493E-02	-.072	.131
School Size	-.440	-.103	.053	-.281	-.066	.208	-.217	-.064	.228
Interaction Rural/Urban	.788	.199	.303	1.036	.255	.171	1.088	.270	.155
Religion	.621	.146	.003	.275	.152	.002	.272	.152	.002
Relative Advantage Population	-4.700E-03	-.007	.896	5.904E-03	.009	.869	5.417E-03	.008	.880
Relative Advantage Individual	3.054E-02	.138	.019	2.823E-02	.121	.042	2.620E-02	.113	.064
Compatibility	3.395E-03	.037	.540	-5.238E-03	-.056	.374	-4.511E-03	-.049	.445
Complexity	7.123E-02	.407	.000	3.555E-02	.198	.001	3.188E-02	.178	.004
Trialability				.243	.395	.000	.231	.376	.000
Observability							1.972E-02	.082	.096

*p<.05

**p<.01

CHAPTER V

CONCLUSION, LIMITATIONS, AND DISCUSSION

The purpose of this study was to assess indicators of adoption of abstinence-only-until-marriage education as an innovation by middle school principals in the state of Texas. The study also assessed school principals' likelihood of adopting such programs. This chapter presents the findings of this research. It also provides detailed discussion of the study's results and offers conclusions, as well as recommendations for further research.

Conclusion

One challenge facing public schools is governance of adolescent risky behaviors. Educators are expected to provide instructional activities that enhance protective factors for youth to reduce risky behaviors (Resnick, et al., 1997). This is an especially daunting challenge when it relates to sexual behavior of adolescents. Adolescents who engage in early sexual activity put themselves at risk for potentially negative consequences. Concerns include teen pregnancy rates, HIV/AIDS, STIs/STDs and other issues surrounding sexuality (Kirby, 2000; Resnick, et al., 1997; Kirby, Barth, Leland & Fetro, 1991). The dissemination of funds to promote abstinence as the primary method of preventing pregnancy and STIs/STDs is one response to this challenge. Another response is development of school policies to encourage instruction about abstinence. Given this context, the impact of school-based abstinence education and the role of the principal in its adoption are of special interest for those charged with promoting healthy sexual behavior among youth.

Diffusion of Innovation theory defines an innovation as an idea, practice, or object that is perceived as new by members of a social system. According to Rogers (1995), five characteristics of an innovation influence the rate of its adoption. Those characteristics are relative advantage of the

innovation, its compatibility with personal and professional beliefs/values, its complexity, trialability, and observability (Rogers, 1995).

Summary of Findings

This study explores principals' indicators and likelihood of adoption of abstinence-only-until-marriage education in the state of Texas. The typical participant in this study was a Texas public middle school principal whose school was located in an urban county. The principal, between the ages of 40 and 54 years, indicated that while he (male response rate was 57%) could make innovative decisions for the school, there were other key decision makers, such as the school board, a site-based team, or a health advisory committee. The "average" respondent was not presently receiving, or did not know if his school was receiving, Title V funds to promote abstinence-only-until-marriage education. Additionally, the typical respondent did not know if there was a Texas Department of Health or federally funded abstinence-only-until-marriage education program close to his school.

Findings from this study indicated that the middle school principal who was most willing to adopt abstinence-only-until-marriage education programs into his or her school's curriculum strongly believed that abstinence education provided important advantages for youth (at the population-level and individual-level) and strongly perceived abstinence-only-until-marriage education to be consistent with his or her professional and personal beliefs and values. The average principal did not strongly perceived abstinence-only-until-marriage education to be complex. The typical respondent agreed that elements of abstinence-only-until-marriage education could be easily tried in the school, and considered it important to observe other principals adopting abstinence-only-until-marriage education prior to adopting the innovation.

This study also found most middle school principals were likely to allow an abstinence-only-until-marriage education program to present in their school (79.1%) and principals were

inclined to purchase curricula with abstinence funding (57.7%). Nearly half of the sampled principals were likely to apply for a grant to support abstinence-only-until-marriage education (48.7%) and hire staff with funding resources for abstinence-only-until-marriage education. Principals were less likely to purchase curricula or hire staff without funding, however. Although the principal's own religiosity played a significant role in the likelihood of adopting abstinence-only-until-marriage education programs, 67% were not likely to allow faith-based abstinence-only-until-marriage education programs to present in their school.

Limitations

The contextual political and social issues surrounding abstinence-only-until-marriage education were not explored in depth in this study. Nevertheless, given the lack of empirical data on abstinence-only-until-marriage education, this study represents an important contribution to the understanding of factors influencing principals' decisions to adopt this innovation. While this study examined a randomly selected sample of middle school principals in the state of Texas, one of its limitations was the possibility that principals responding to the survey had more knowledge of abstinence-only-until-marriage education programs than non-respondents, or stronger concern for the issue.

The statistical model that tested the conceptual model proposed in Figure 1 accounted for 41% of the variance in the multiple regression analysis. In consideration of the principals' schedules, it was essential to keep the survey brief; therefore, it was necessary to examine only the perceived characteristics of abstinence-only-until-marriage education. Furthermore, little is known about these characteristics in the scientific literature. There are several other factors in the Diffusion of Innovation theory that might be further examined to understand the adoption process. Other elements of the adoption process could account for the other portions of the variance in the likelihood of adopting abstinence-only-until-marriage education.

Another limitation of this study was that three school districts contacted the researcher regarding research in their district. They indicated before research could be conducted in the district, a proposal had to be submitted to a local review board. This limited the number of responses from Fort Bend ISD (Region IV), Bryan ISD (Region VI) and Austin ISD (Region XIII). In light of these responses, principals from other school districts may not have responded to the survey for the same reason.

Discussion

One characteristic of an innovation that is important to adopters is the “relative advantage” of an innovation (Rogers, 1995). According to this study, principals perceived the strongest advantages of abstinence-only-until-marriage education as population-based—reducing teenage pregnancy and reducing STDs/STIs. They also felt that advantages at an individual-level included increasing self-esteem and self-efficacy, and improving communication, decision-making, and leadership skills of individual youth. If principals are to adopt these programs, it is important they know and recognize perceived “advantages” of abstinence-only-until-marriage education (Hallfors & Godette, 2002).

Some sexuality-based programs address population-based health issues such as adolescent pregnancy, HIV/AIDS infection and other STIs/STDs, whereas many programs, curricula, and educators focus on individual-level skills for youth such as effective communication, coping, and decision-making skills to prevent sexually risky behaviors (Greene, 1998; Tingle, 2002; Hahn, Noland, Rayens & Christie, 2002; Matthews & Menna, 2003). Principals, abstinence educators, and sexuality health educators need to consider how perceived “advantages” are addressed by sexuality-based education before adopting a curriculum or program. Further, students have diverse needs. Youths’ requirements need to be considered when deciding which type of sexuality education program will be adopted into a school’s curriculum.

This study also found the (a)-(h) definition of abstinence-only-until-marriage education (see Table 1) was compatible with most middle school principals' personal and professional beliefs. "Compatibility" shows the extent to which an innovation is consistent with current values, experiences, and beliefs of adopters (Rogers, 1995). Research indicates school-based sexuality education for children and adolescents is favored by a majority of adults and parents in the United States (Darroch, Landry & Singh, 2000; Kirby, 2000; Lickona, 2000; Rodriguez, 2000; Haffner & Wagoner, 1999). Further, many teachers believe sexuality education should be introduced early in school and with age-appropriate topics. Parents favor sex education that teaches about contraception and safer sex practices (Wilson, 2000; Landry, Singh & Darroch, 2000). Yet, Texas middle school principals believe abstinence-only-until-marriage education that does not cover contraception and safer sex practices is compatible with their personal and professional beliefs.

Is this purely a Texas phenomenon (that abstinence-only-until-marriage education is compatible with principal's personal and professional beliefs)? One suspicion is that public school administrators in Texas represent a more conservative community. Even when principals are supportive of a new idea, their ability to provide leadership may be hampered by their own experience, training, or beliefs (Datnow & Castellano, 2001). For example, students in Lubbock, Texas, an area where this study had a high response, have been attempting to make administrators aware of students' needs for a more comprehensive sexuality curriculum. In a recent proposal, based on teen birth rates and STI/STD rates, students asked The Lubbock Youth Commission to change the current abstinence-only curriculum to a more comprehensive approach. The proposal was not passed, but students are continuing their efforts to gain the attention of administrators (Connoley, 2003; Batchelder, 2003).

This study also indicated there were some statements from the (a)-(h) definition that were less compatible with both personal and professional beliefs than others. As one principal states, "I believe this curriculum is important, but personally and professionally, it cannot be the only

answer.” Perhaps this is due to the wording of the (a)-(h) definition. One item with a smaller frequency of consistency for compatibility with personal and professional beliefs was “sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.” According to Young and Goldfarb (2000), overall, there are concerns regarding the language in the current federal definition of abstinence. Those involved with the abstinence-education legislation need to be aware of these concerns and how they might impact the adoption decision. The promotion of abstinence education strictly from the standpoint of its definition may not take into account that many elements of the definition may not be fully compatible with principals’ personal and professional beliefs.

According to Rogers, “complexity” is the degree to which an innovation is perceived as difficult to understand and use (Rogers, 1995, p 242). Analysis of the responses led to the conclusion that if principals perceived abstinence-only-until-marriage education to be less complex, then they were more likely to adopt the program. This finding is supported by much of the research that utilizes Diffusion of Innovation theory (Gray, 2001; Uhrmacher, 1997). Therefore, a supporter of abstinence-only-until-marriage education needs to keep in mind that the less imposing the innovation, the more likely the principal is to adopt the program. For example, if a resource or curriculum is easy to find, the principal will more likely adopt the program.

Complexity is an important variable in understanding adoption according to Zaritsky, Kelly, Flowers, Rogers & O’Neill (2003). Their study found principals considered it somewhat easy to locate resources, curricula, or staff to implement abstinence-only-until-marriage education. One exception occurred in McLennan County Texas during the 1997–1998 school year. In this case, a federally funded abstinence program was providing a fully funded, abstinence-only-until-marriage curriculum, and it would seem that the politics determined (above and beyond complexity) whether the curriculum was adopted. One of the 17 school districts in the area refused the free resource. Despite district-wide debate over accepting the program, the stakeholders chose a different resource,

a curriculum that focused on abstinence but also included other information about sexuality (Hall, 2003; Kempner, 1998).

For the middle school principals who participated in this study, abstinence-only-until-marriage education could be incorporated into their school's curriculum on a gradual basis. Diffusion of Innovation theory identifies "trialability" as the degree to which an innovation may be experimented with on a limited basis (Rogers, 1995). However, the benefit of any public health intervention is partially determined by the extent to which it is appropriately adopted (Oldenburg, Sallis, French, Owen, 1999). Principals may want to consider adopting portions of an abstinence-only-until-marriage education program before committing to an entire program. If the program is implemented in pieces, or on a trial basis, the principal has time to make sure the message is appropriate for youth in the school. Partial implementation also will allow the principal to gradually involve stakeholders. Those involved in abstinence education or sexuality-based education need to understand that a principal may not be willing to automatically adopt an entire curriculum or program into his or her school. They should structure their curriculum or program so it can be implemented appropriately on a gradual basis, if the principal is interested in doing so.

The "observability" construct refers to how the results, adoption, and use of the innovation are noticed by others (Rogers, 1995). When an innovation is easily observed and accepted by other members of the same social system, people are more likely to adopt the innovation (Rogers, 1995). Most of the respondents perceived their colleagues as adopting abstinence-only-until-marriage education programs into their schools' curricula. Adoption was observed at almost the same level within respondents' local school districts (65%) as with schools nationwide (66%). If a principal knows that one of his or her colleagues is implementing abstinence programs in his or her school, he or she may use that colleague as a resource for networking and for learning about the issues involved in implementation. Abstinence-only-until-marriage education programs may consider using

principals as advocates for facilitation of the programs and for dissemination of information regarding the programs among schools not using the programs.

An analysis of gender resulted in evidence of a significant difference between how females and males observe colleagues adopting abstinence-only-until-marriage education into their schools' curricula. Females were more likely to state they have observed colleagues adopting abstinence education. According to Datnow and Castellano (2001), gender is one of the most important variables in power relationships within schools. This is in part because of the "traditional" male administrative position and "conventional" female teaching force (Datnow & Castellano, 2001). Due to this established arrangement, perhaps, female principals involved in this study were influenced by their "social world" and "cultural arrangements." Armed with information found in this study, pregnancy prevention programs may consider targeting female principals as a champion for the program.

This study investigated what factors and perceived attributes influenced the likelihood of adoption of abstinence-only-until-marriage education. Religion was found to be a factor in the final multiple regression analysis that influenced the likelihood of adoption. The more "religious" a person was, the more likely he or she was to adopt abstinence-only-until-marriage education into his or her school's curriculum. In 1998, the first year of funding from the Welfare Reform Act, more than one in ten federally funded dollars were used for faith-based initiatives (Sonfield & Gold, 2001). The persistent connection between the promotion of abstinence and issues related to the separation of church and state lends importance to the finding regarding religion (Kenny & Sternberg, 2003). Because this study found religion to be a factor in the likelihood of adopting abstinence-only-until-marriage education programs, educators and researchers alike need to be sensitive to the role of religion in the process of curriculum adoption. Further, the principal also needs to be conscious of how his or her personal religious beliefs influence the school's curriculum.

When comparing responses from principals in rural and urban counties, regarding the attribute of trialability, principals located in rural counties were more likely to implement elements of abstinence-only-until-marriage education on a trial basis. One could speculate that principals with schools located in a rural setting may have fewer barriers to implementation of innovative programs than those in an urban setting. Research supports the notion that there are differences in rural and urban areas that influence educators as well as curriculum developers as they encourage young people to prevent teen pregnancy or STIs/STDs (Hawkins, et al., 2002; Alexander, et al., 1989; Barnett & Hurst, 2003). Findings from this study indicate principals 30 to 39 years of age (one of the younger age groups), and principals 55 years of age and over (the oldest group), were more likely to adopt abstinence-only-until-marriage education compared with other age groups. The number of years serving as a principal was not found to influence the likelihood of adopting abstinence-only-until-marriage education. A sense of community, the trust of social networks, and/or more conservative values may play a role in adopting abstinence-only-until-marriage education programs among various demographic sub-groups. Furthermore, McKay (1999) suggests that to participate in society, in this case a school setting, the principal must internalize and adhere to the rules of the “society.” Abstinence educators may find that it is possible to target rural principals, and then, once the program is successful in rural areas, find ways to implement it in the urban setting. Abstinence educators or others in sexuality based education also may want to consider targeting principals who fall into a certain age category to become change agents or key informants for their programs.

Some handwritten and verbal comments from respondents and non-respondents (non-respondents either sent a note or called on the telephone, but did not return a completed survey) expressed concern that their campuses served fifth or sixth graders. These principals did not feel it was appropriate to address sexuality-based issues with their target age groups. This is consistent with a large proportion of schools in the United States that are doing little to prepare students in these grades to manage the pressures and decisions regarding sexual activity (Landry, Singh &

Darroch, 2000). One principal responded, "...this is a 6th grade only campus. We're not going to address sexual activity in any way to 11 year olds." Another principal avoided abstinence-only-until-marriage education by suggesting a more character-based approach. He wrote, "Be proactive → try the 7 Habits of Successful Teens!" These findings suggest principals have concerns about appropriateness and demonstrate that they believe youth shouldn't learn about sexuality so early, reflecting a conservative, restrictive view of child development and sexuality education. By contrast, in Oregon, Title V money is used for a program, *STARS*, which is specifically focused on 6th graders. In addition, they use the funds for three other programs that focus on elementary-school-age children (Smith, 2003). There is a lot of variability—even among abstinence programs—regarding the appropriate age at which to begin presenting the abstinence message.

Many states mandate some form of sexuality education; regulations, however, are rarely enforced. Teachers, along with school and district administrators, set priorities of what needs to be done in the school or classroom. With the school reform agendas, accountability issues, and standardized testing required by principals and educators, rarely is the "school's" focus on health education or sexuality education. Efforts to implement school health programs indicate that the key to a successful program is a school principal or assistant principal who recognizes the importance and value of the program (Marx & Wooley, 1998; Goertz & Duffy, 2003; Hallfors & Godette, 2002). However, principals often fail to support the sexuality-education based mandates established by the states, which signals that sexuality-based education is not a priority (Goldfarb, 2003).

Federal support for abstinence-only-until-marriage programs is also available through the Social Services Block Grant, and has included up to \$50 million per year, for five years (Welfare Reform Law, 1996). Additional support for this effort is available through state/local matching funds and other fiscal resources. Given such substantial funding, it was interesting to find that 84% of principals did not know if there was a Texas Department of Health or Title V program close to their schools. This is an important issue, because funding agencies may assume public schools and

key decision makers know about school-based programs. In fact, this research suggests they do not know about such programs.

Four principals did not complete the survey, but informed the researcher that they were already implementing a specific abstinence curriculum, “Worth the Wait.” The researcher found some of the comments from these individuals curious:

We use this [Worth the Wait] curriculum and it is vastly superior to any other product.

We already have an abstinence only Sex-Ed program adopted by our district—Scott & White’s [Worth the Wait]—so I don’t think completing this survey will give you the information you’re looking for. This is the 3rd year it’s been in place.

These comments were interesting because Scott and White’s “Worth the Wait” curriculum is a Texas Department of Health funded abstinence-only-until-marriage program. It can only be speculated that, for some reason, the principals from schools using “Worth the Wait” may have been advised not to participate in outside, independent evaluations such as this one (Young & Goldfarb, 2002).

Recommendations for Further Research

Future study of the adoption of abstinence-only-until-marriage education programs should further investigate the elements presented in this study. Although the researcher has suggested how attributes of an innovation predict the likelihood of adoption, there are many other factors involved in the adoption process. Researchers may wish to examine adoption from specifically the rural or urban perspective, for instance. One could pay attention to the principal’s direct role in abstinence-only-until-marriage education integration, with attention focused on how and to what extent principals support educators and instructors in the incorporation of abstinence education into the classroom. Also, research on other elements of the Diffusion of Innovation theory could be conducted.

Principals are important decision-makers in adoption and continuance of programs; however, other decision makers require attention as well. As one “young” principal stated, “This is my first year...these decisions are not up to me, but our superintendent.” Another principal responded, “you might be better served by surveying school board members considering the volatility of the subject.” With that said, research studies could focus on other individuals’ roles in abstinence education adoption, such as school board members or the health advisory council. The interactions among decision makers, and how these interactions affect the decision-to-adopt process, also might be relevant for future exploration.

This study also could be expanded outside the state of Texas and beyond the middle school principal population, given that the findings’ external validity needs to be established. Furthermore, the opinion of stakeholder groups in the community is important. Research could further the understanding of the role that educators and other community members, such as parents, play in the adoption of abstinence-only-until-marriage education. While many other facets could and should be examined in the future, the present study represents, nevertheless, an important step toward building a much-needed knowledge base for one type of prevention program, namely abstinence-only-until-marriage education.

Final Thoughts

Once the political and moral agendas clear, then perhaps those interested in designing effective sexuality education programs for youth will have a foundation upon which a solid and fact based program can be established. This dissertation may serve as one of the building blocks in understanding the principal’s role in adopting such a program.

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APPENDIX A
GLOSSARY OF SELECTED TERMS

GLOSSARY OF SELECTED TERMS

ABSTINENCE

The act or practice of refraining from oral, anal, and vaginal sexual activity.

ABSTINENCE-BASED EDUCATION

Programs are also referred to as abstinence-plus or abstinence-centered. An HIV-prevention and sexuality education program that emphasizes the benefits of abstinence. Abstinence-based education also includes information about non-coital sexual behavior, contraception, and disease prevention methods.

ABSTINENCE-ONLY EDUCATION

An HIV-prevention and sexuality education program that emphasizes abstinence from all sexual behaviors for youth. They do not include any information about contraception or disease prevention methods.

ABSTINENCE-ONLY-UNTIL-MARRIAGE EDUCATION

An HIV-prevention and sexuality education program that emphasizes abstinence from all sexual behaviors outside of marriage. They do not include any information about contraception or disease-prevention methods. These programs typically present marriage as the only morally correct context for all sexual activity.

AFTER SCHOOL PROGRAM

Programs outside of school hours that offer a healthy and positive alternative to juvenile crime and risky behaviors such as sexual activity or alcohol and drug use by keeping youth safe, improving academic achievement, and helping relieve the stresses on today's working families.

CHARACTER EDUCATION

Educational programs that focus on an effort for youth to understand, care about, and act on core ethical and moral values.

COMPREHENSIVE SEXUALITY EDUCATION

Sexuality education programs that start in kindergarten and continue through twelfth grade. These programs include information on a broad set of topics related to sexuality and provide students with opportunities for developing skills as well as learning factual information.

RURAL

Any area outside a Metropolitan Statistical Area or outside a similar area as recognized by regulation.

TITLE V

The purpose of an allotment under this section is to enable the state to provide abstinence education and the option of mentoring, counseling, and adult supervision to promote abstinence from sexual activity, with a focus on those groups most likely to bear children out of wedlock.

URBAN

An area within a Metropolitan Statistical Area or within such similar area as recognized by regulation; the term "large urban area" means, with respect to a fiscal year, such an urban area with a population of more than 1,000,000.

GLOSSARY OF TERMS ADAPTED AND CITED FROM

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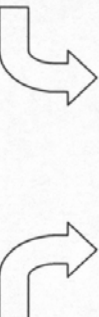
APPENDIX B
FINAL SURVEY INSTRUMENT



Abstinence-Only-Until-Marriage Education Adoption Survey



Texas A&M University

For the purpose of this survey, *abstinence-only-until-marriage* refers to programs that promote abstinence-until-marriage as the expected standard of behavior in a directive manner. The programs provide students with information on building healthy relationships, levels of intimacy, the benefits of abstinence and the consequences of premarital sexual behavior.

Please clearly mark one circle that best reflects your answer. Please note when there are **two** answers requested.

1. I believe one of the advantages of abstinence-only-until-marriage education is to...					2. How important is it for you to be able to...				
Strongly Agree	Agree	Disagree	Strongly Disagree	I'm Not Sure					
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	a. Reduce the number of unwanted pregnancies among youth.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	b. Reduce the number of sexually transmitted infections/diseases among youth.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	c. Increase youth's self esteem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	d. Increase youth's self-efficacy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	e. Increase youth's communication skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	f. Increase youth's decision-making skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	g. Increase youth's leadership skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. How easy or difficult is it for you to...							8. How important is it for you to be able to...				
Very Easy	Somewhat Easy	Somewhat Difficult	Very Difficult	I'm Not Sure			Extremely Important	Important	Not Very Important	Not Important At All	I'm Not Sure
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	a. Find resources to deliver the abstinence-only-until-marriage education message?		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	b. Find funding to support the abstinence-only-until-marriage message?		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	c. Acquire curriculum to teach abstinence-only-until-marriage education?		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	d. Find people skilled and capable of promoting the abstinence-only-until-marriage message?		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	e. Understand policies regarding abstinence-only-until-marriage education?		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. How much do you agree with the following...							10. How important is it that...				
Strongly Agree	Agree	Disagree	Strongly Disagree	I'm Not Sure			Extremely Important	Important	Not Very Important	Not Important At All	I'm Not Sure
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	a. Your school's curriculum <i>can</i> easily incorporate elements of abstinence-only-until-marriage education.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	b. Your school's curriculum <i>cannot</i> easily incorporate elements of abstinence-only-until-marriage education.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Are you male or female?
☐ Male
☐ Female
15. What is your age? _____
16. How many years have you been a principal at any school? _____
17. What year did you start your principalship at your current school?

18. Which of the following best describes you?
☐ White
☐ African American/Black
☐ Hispanic
☐ Asian, Oriental, or Pacific Islander
☐ American Indian or Native American
☐ Other (Please Name) _____
19. In which Texas county is your school located?

20. In which Education Service Center Region is your school located?
 (Circle One)
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
21. About how often do you go to religious service, for example at a church, temple or mosque?
☐ never
☐ sometimes, but not every week
☐ once a week
☐ more than once a week
22. How important is religion in your life?
☐ not important
☐ a little important
☐ very important
23. Does your school receive Title V abstinence-only-until-marriage education funding from the Texas Department of Health?
☐ Yes
☐ No
☐ I don't know
24. Does your school receive any other abstinence-only-until-marriage education funding from an outside source?
☐ Yes
☐ No
☐ I don't know
25. Do you know if there is a Title V or Texas Department of Health funded abstinence-only-until-marriage education program close to you?
☐ Yes, and I utilize their services in my school.
☐ Yes, but I do not utilize their services.
☐ No, there is not a program close to my school.
☐ I don't know
26. What would best describe your school size?
☐ 400 or fewer students
☐ 401-675 students
☐ 676-1000 students
☐ 1001-1400 students
☐ 1400 or more students
27. Who makes the final decision on the adoption of innovative programs?
☐ the teacher
☐ the principal
☐ the superintendent
☐ the school board
☐ other _____
28. Which best describes your professional practice?
☐ Middle School Principal
☐ Middle School Assistant/Vice-Principal
☐ Other _____

Thank you for taking the time to fill out this survey!

APPENDIX C

**FINAL STUDY'S PRENOTICE LETTER, COVER LETTERS, FOLLOW UP
POSTCARD, AND INFORMED CONSENT**



TEXAS A&M UNIVERSITY
College of Education and Human Development
Department of Health and Kinesiology

August 25, 2003

Dear Middle/Junior High School Principal:

A few days from now you will receive in the mail a request to fill out a brief questionnaire for an important research project being conducted by Texas A&M University and Texas Department of Health.

This study will assess the likelihood of principals adopting abstinence-only-until-marriage education as an innovation in Texas middle schools.

I am writing in advance because we have found many people like to know ahead of time that they will be contacted. This study is an important one that will help educators appreciate and understand the influence of administrative adoption on abstinence education.

Thank you for your time and consideration. It's only with the generous help of people like you that our research can be successful.

Sincerely,

Kelly Wilson, M.Ed.
Principal Investigator



TEXAS A&M UNIVERSITY
College of Education and Human Development
Department of Health and Kinesiology

September 5, 2003

Dear Middle/Junior High School Principal,

Enclosed you will find a **short but very important** survey. Please take a few minutes to respond to the questions. The purpose of the survey is to examine the factors that influence the likelihood of principals incorporating abstinence-only-until-marriage education into their curriculum. This survey does not measure knowledge about abstinence-only-until-marriage education.

Your name was randomly selected from the Texas Education Agency directory of principals. All surveys will be number coded but your answers are completely confidential. Only statistical information from combined data will be used for reporting.

If you have any questions about the survey, please feel free to call me or write to me at the address below.

Thank you very much for helping with this study.

Sincerely,

Kelly L. Wilson, M.Ed.
Texas A&M University
Department of Health and Kinesiology
TAMU 4243
College Station, TX 77843-4243
Phone: 979-458-0097
Fax: 979-847-8987
kellyw@hlkn.tamu.edu



September 15, 2003

Last week a questionnaire seeking your opinions about abstinence-only-until-marriage education was mailed to you. Your name was randomly selected from a list of Texas Middle School Principals.

If you have already completed and returned the questionnaire to me, please accept my sincere thanks. If not, please do so today. We are especially grateful for your help because it is only by asking people like you to share your experiences that we can understand why principals adopt abstinence-only-until-marriage education.

If you did not receive a questionnaire, or if it was misplaced, please call me at 979-458-0097 or email me at kellyw@hlkn.tamu.edu and I will get another one in the mail to you today.

Kelly Wilson, Principal Investigator





TEXAS A&M UNIVERSITY
 College of Education and Human Development
 Department of Health and Kinesiology

October 6, 2003

About three weeks ago I sent a questionnaire to you that asked about factors that influence the likelihood of middle school principals incorporating abstinence-only-until-marriage education into their curriculum. To the best of my knowledge, it's not yet been returned.

The comments from principals who have already responded have been useful in understanding the adoption of abstinence-only-until-marriage programs in middle schools. I think the results are going to be very useful to administrators, health educators and others.

I am writing again because of the importance that your questionnaire has for helping to get accurate results. Although I sent the questionnaire to middle school principals in each Education Service Center Region, it's only by hearing from nearly everyone in the sample that I can be sure that the results are truly representative.

A few people have written to say that they should not have received the questionnaire because they are a principal at a 5th or 6th grade campus, or that their students are too young for abstinence education. If either of these concerns applies to you, please still fill out the questionnaire. I purposefully selected middle school principals, and your school was identified by TEA as a "middle school."

A questionnaire identification number is printed or labeled on the front of the questionnaire. This is so that I can check your name off of the mailing list when it is returned. The list of names is then destroyed so that individual names can never be connected to the results in any way. Protecting your confidentiality is important to me, as well as the University.

I hope that you will fill out and return the questionnaire soon, but if for any reason you prefer not to answer it, please let me know by returning a note or blank questionnaire in the enclosed stamped envelope.

Sincerely,

Kelly Wilson
 Principal Investigator

P.S. If you have any questions, please feel free to contact me. The number where I can be reached is 979-458-0097, or you can email me at kellyw@hlkn.tamu.edu.

Informed Consent for Survey Participants (Final Study)

Abstinence-Only-Until-Marriage Education Adoption Survey

September, 2003

I have been invited to participate in a study that will examine the factors that influence the likelihood of principals incorporating abstinence-only-until-marriage education into their curriculum. Kelly Wilson is conducting this study. Presently, she is a doctoral student in health education in the Department of Health and Kinesiology, College of Education and Human Development, at Texas A&M University. This study is part of her dissertation research.

The recent funding of abstinence-only-until-marriage education is supporting a message that encourages adolescents to adopt sexual abstinence as their primary method of preventing pregnancy and sexually transmitted infections. It is predicted that the abstinence-only-until-marriage message will continue to be infused in the public schools. The proposed study intends to investigate middle school principals' perceptions of abstinence-only-until-marriage education that may influence the adoption of this innovation into their school's curriculum.

I am being invited to participate in this survey (along with 904 peers) because my name was randomly chosen from the Texas Education Agency's directory of middle school principals.

My participation in this study entails answering this survey and returning it to Kelly Wilson, in the enclosed self-addressed stamped envelope. My participation is voluntary and I am not obligated to answer any of the questions posed in the questionnaire. As there is little information on this subject, however, my input will represent a valuable contribution to the study of principals' views of abstinence-only-until-marriage education.

Risks, discomforts and inconveniences are minimal. Risks may include feeling that I haven't thought through some of the questions enough to provide answers or feeling as if I don't have the right answer. On the other hand, benefits may be expected from participating in this study. One is the opportunity to state my point-of-view on the subject and reflect on my role as a school administrator.

I understand that every effort will be made to keep all information confidential. Even though surveys received a number code so demographic differences between respondents and non-respondents can be assessed, these codes will only be available to the principal investigator, and will be kept in a locked file in her office until surveys are returned. After that, the list will be destroyed.

My decision whether to participate will not affect my future relations with Texas A&M University, in any way. I understand I am under no obligation to participate in the study. I may withdraw from the study at any time, if I wish to.

This research study has been reviewed and approved by the Institutional Review Board-Human Subjects in Research, Texas A&M University. If I have any research-related problems or questions regarding subjects' rights I may contact the Texas A&M Institutional Review Board through Dr. Michael W. Buckley, IRB Coordinator, Office of Vice President for Research at (979) 845-8585, mwbuckley@tamu.edu.

If at any time, I have any questions about this study or further information I would like to add, I may contact Kelly Wilson at the phone number or e-mail address below, or her advisor, Dr. B.E. Pruitt at (979) 845-3503 or buzz@hikn.tamu.edu.

I also understand that by filling out the survey and returning it by mail, I am agreeing to participate in this study. I may keep this copy of the informed consent.

PRINCIPAL INVESTIGATOR:

SURVEY PARTICIPANT:

Kelly Wilson, M.Ed., CHES
Texas A&M University
Department of Health and Kinesiology
TAMU 4243
College Station, TX 77843-4243
Phone: (979) 845-3503
kellyw@hikn.tamu.edu

DATE

APPENDIX D

TEXAS A&M UNIVERSITY INSTITUTIONAL REVIEW BOARD LETTER OF

APPROVAL



Date August 8, 2003

Office of Research Compliance

MEMORANDUM

Administration and
Special Programs

Academy for
Telecommunication
and Learning
Technologies

Institute for
Scientific Computation

Laboratory Animal
Resources and Research

Microscopy and
Imaging Center

Office of
Business Administration

Office of Graduate Studies

Office of Sponsored Projects

Texas A&M University
Research Park

TO: Ms. Kelly Wilson
Department of Health and Kinesiology
MS 4243

FROM: Dr. E. Murl Bailey, CIP, Advisor
Institutional Review Board
MS 1112

SUBJECT: IRB Protocol Review

Title: Principals' Adoption of Abstinence-Only-Until -Marriage Programs in Texas Public Middle Schools

Protocol Number: 2003-0325

Review Category: Exempt from Full Review

Approval Date: August 8, 2003 to August 7, 2004

The approval determination was based on the following Code of Federal Regulations
<http://ohrp.osophs.dhhs.gov/humansubjects/guidance/45cfr46.htm>

_____ 46.101(b)(1)	_____ 46.101(b)(4)
_____ 46.101(b)(2)	_____ 46.101(b)(5)
_____ 46.101(b)(3)	_____ 46.101(b)(6)

Remarks:

None



Texas A&M
University

1112 TAMU

318 Administration Building

College Station, Texas

77843-1112

979.845.8585

FAX 979.862.3176

The Institutional Review Board – Human Subjects in Research, Texas A&M University has reviewed and approved the above referenced protocol. Your study has been approved for one year. As the principal investigator of this study, you assume the following responsibilities:

Renewal: Your protocol must be re-approved each year in order to continue the research. You must also complete the proper renewal forms in order to continue the study after the initial approval period.

Adverse events: Any adverse events or reactions must be reported to the IRB immediately.

Amendments: Any changes to the protocol, such as procedures, consent/assent forms, addition of subjects, or study design must be reported to and approved by the IRB.

Informed Consent/Assent: All subjects should be given a copy of the consent document approved by the IRB for use in your study.

Completion: When the study is complete, you must notify the IRB office and complete the required forms.

PART 46.101 PROTECTION OF HUMAN SUBJECTS

46.101

(a) Except as provided in paragraph (b) of this section, this policy applies to all research involving human subjects conducted, supported or otherwise subject to regulation by any Federal Department or Agency which takes appropriate administrative action to make the policy applicable to such research. This includes research conducted by Federal civilian employees or military personnel, except that each Department or Agency head may adopt such procedural modifications as may be appropriate from an administrative standpoint. It also includes research conducted, supported, or otherwise subject to regulation by the Federal Government outside the United States.

(1) Research that is conducted or supported by a Federal Department or Agency, whether or not it is regulated as defined in 46.102(e), must comply with all sections of this policy.

(2) Research that is neither conducted nor supported by a Federal Department or Agency but is subject to regulation as defined in 46.102(e) must be reviewed and approved, in compliance with 46.101, 46.102, and 46.107 through 46.117 of this policy, by an Institutional Review Board (IRB) that operates in accordance with the pertinent requirements of this policy.

(b) Unless otherwise required by Department or Agency heads, research activities in which the only involvement of human subjects will be in one or more of the following categories are exempt from this policy:¹

(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:

(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if:

(i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

(5) Research and demonstration projects which are conducted by or subject to the approval of Department or Agency heads, and which are designed to study, evaluate, or otherwise examine:

(i) Public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

(6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

APPENDIX E
PILOT STUDY SURVEY INSTRUMENT



Abstinence-Only-Until-Marriage Education Adoption Survey



Pilot Test
Texas A&M University



For the purpose of this survey, *abstinence-only-until-marriage* refers to programs that promote abstinence-until-marriage as the expected standard of behavior in a directive manner. The programs provide students with information on building healthy relationships, levels of intimacy, the benefits of abstinence and the consequences of premarital sexual behavior.



Please clearly mark one circle that best reflects your answer. Please note when there are two answers requested.

1. I believe one of the advantages of abstinence-only-until-marriage education is to...					2. How important is it for you to be able to...					
Strongly Agree	Agree	Disagree	Strongly Disagree	I'm Not Sure		Extremely Important	Important	Not Very Important	Not Important At All	I'm Not Sure
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	a. Reduce the number of unwanted pregnancies among youth.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	b. Reduce the number of sexually transmitted infections/diseases among youth.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	c. Increase youth's self esteem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	d. Increase youth's self-efficacy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	e. Increase youth's communication skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	f. Increase youth's decision-making skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	g. Increase youth's leadership skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. How compatible is the following statement with your personal standards?					 		4. How consistent is the following statement with your professional standards?				
Strongly Agree	Agree	Disagree	Strongly Disagree	I'm Not Sure		Strongly Agree	Agree	Disagree	Strongly Disagree	I'm Not Sure	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	h. Attaining self-sufficiency before engaging in sexual activity is important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

5. How important is it for the following statement to be consistent with your <u>personal</u> standards?					 		6. How important is it for the following statement to be compatible with your <u>professional</u> standards?				
Extremely Important	Important	Not Very Important	Not Important At All	I'm Not Sure		Extremely Important	Important	Not Very Important	Not Important At All	I'm Not Sure	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	h. Attaining self-sufficiency before engaging in sexual activity is important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

7. How easy or difficult is it for you to...					8. How important is it for you to be able to...						
Very Easy	Somewhat Easy	Somewhat Difficult	Very Difficult	I'm Not Sure			Extremely Important	Important	Not Very Important	Not Important At All	I'm Not Sure
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		a. Find resources to deliver the abstinence-only-until-marriage education message?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		b. Find funding to support the abstinence-only-until-marriage message?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		c. Acquire curriculum to teach abstinence-only-until-marriage education?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		d. Find people skilled and capable of promoting the abstinence-only-until-marriage message?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		e. Understand policies regarding abstinence-only-until-marriage education?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. How much do you agree with the following...					10. How important is it that...						
Strongly Agree	Agree	Disagree	Strongly Disagree	I'm Not Sure			Extremely Important	Important	Not Very Important	Not Important At All	I'm Not Sure
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		a. Abstinence-only-until-marriage education can easily be incorporated into your school's curriculum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		b. Sexuality education programs, other than abstinence-only-until-marriage programs, can easily be incorporated into your school's curriculum.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. How much do you agree with the following...					12. Before you consider adopting abstinence-only-until-marriage education, how important is the following...				
Strongly Agree	Agree	Disagree	Strongly Disagree	I'm Not Sure	Extremely Important	Important	Not Very Important	Not Important At All	I'm Not Sure
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. How likely are you to...				
Extremely Likely	Somewhat Likely	Not Likely	Not Likely At All	I Already Do
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Extremely Likely	Somewhat Likely	Not Likely	Not Likely At All	I Already Do	How likely are you to...
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	f. Allow a state or federally funded abstinence-only-until-marriage education program to be presented in your school.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	g. Allow a faith based abstinence-only-until-marriage education program to be presented in your school.

14. Are you male or female?
☐ Male
☐ Female
15. What is your age? _____
16. How many years have you been a principal at any school? _____
17. What year did you start your principalship at your current school?

18. Which of the following best describes you?
☐ White
☐ African American/Black
☐ Hispanic
☐ Asian, Oriental, or Pacific Islander
☐ American Indian or Native American
☐ Other (Please Name) _____
19. In which Texas county is your school located? _____
20. In which Education Service Center Region is your school located?
 (Circle One)
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
21. About how often do you go to religious service, for example at a church, temple or mosque?
☐ never
☐ sometimes, but not every week
☐ once a week
☐ more than once a week
22. How important is religion in your life?
☐ not important
☐ a little important
☐ very important
23. Does your school receive Title V abstinence-only-until-marriage education funding from the Texas Department of Health?
☐ Yes
☐ No
☐ I don't know
24. Does your school receive any other abstinence-only-until-marriage education funding from an outside source?
☐ Yes
☐ No
☐ I don't know
25. Do you know if there is a Title V or Texas Department of Health funded abstinence-only-until-marriage education program close to you?
☐ Yes, and I utilize their services in my school.
☐ Yes, but I do not utilize their services.
☐ No, there is not a program close to my school.
☐ I don't know
26. What would best describe your school size?
☐ 400 or fewer students
☐ 401-675 students
☐ 676-1000 students
☐ 1001-1400 students
☐ 1400 or more students
27. Who makes the final decision on the adoption of innovative programs?
☐ the teacher
☐ the principal
☐ the superintendent
☐ the school board
☐ other _____
28. Which best describes your professional practice?
☐ Middle School Principal
☐ Middle School Assistant/Vice-Principal
☐ Other _____

Thank you for taking the time to fill out this survey!

APPENDIX F

PILOT STUDY COVER LETTER AND INFORMED CONSENT



TEXAS A&M UNIVERSITY

College of Education and Human Development
Department of Health and Kinesiology

August, 2003

Dear Middle/Junior High School Principal,

Enclosed you will find a **short** but **very important** survey. Please take a few minutes to respond to the questions. The purpose of the survey is to examine the factors that influence the likelihood of principals incorporating abstinence-only-until-marriage education into their curriculum. This survey does not measure knowledge about abstinence-only-until-marriage education.

Your name was randomly selected from the Texas Education Agency directory of principals. All surveys will be number coded but your answers are completely confidential. Only statistical information from combined data will be used for reporting.

If you have any questions about the survey, please feel free to call me or write to me at the address below.

Thank you very much for helping with this study.

Sincerely,

Kelly L. Wilson, M.Ed.
Texas A&M University
Department of Health and Kinesiology
TAMU 4243
College Station, TX 77843-4243
Phone: 979-458-0097
Fax: 979-847-8987
kellyw@hlkn.tamu.edu

**I need
your
help!**



PILOT STUDY

Informed Consent for Survey Participants (Pilot Study)

Abstinence-Only-Until-Marriage Education Adoption Survey

August, 2003

I have been invited to participate in a study that will examine the factors that influence the likelihood of principals incorporating abstinence-only-until-marriage education into their curriculum. Kelly Wilson is conducting this study. Presently, she is a doctoral student in health education in the Department of Health and Kinesiology, College of Education and Human Development, at Texas A&M University. This study is part of her dissertation research.

The recent funding of abstinence-only-until-marriage education is supporting a message that encourages adolescents to adopt sexual abstinence as their primary method of preventing pregnancy and sexually transmitted infections. It is predicted that the abstinence-only-until-marriage message will continue to be infused in the public schools. The proposed study intends to investigate middle school principals' perceptions of abstinence-only-until-marriage education that may influence the adoption of this innovation into their school's curriculum.

I am being invited to participate in this survey (along with 200 peers) because my name was randomly chosen from the Texas Education Agency's directory of middle school principals.

My participation in this study entails answering this survey and returning it to Kelly Wilson, in the enclosed self-addressed stamped envelope. My participation is voluntary and I am not obligated to answer any of the questions posed in the questionnaire. As there is little information on this subject, however, my input will represent a valuable contribution to the study of principals' views of abstinence-only-until-marriage education.

Risks, discomforts and inconveniences are minimal. Risks may include feeling that I haven't thought through some of the questions enough to provide answers or feeling as if I don't have the right answer. On the other hand, benefits may be expected from participating in this study. One is the opportunity to state my point-of-view on the subject and reflect on my role as a school administrator.

I understand that every effort will be made to keep all information confidential. Even though surveys received a number code so demographic differences between respondents and non-respondents can be assessed, these codes will only be available to the principal investigator, and will be kept in a locked file in her office until surveys are returned. After that, the list will be destroyed.

My decision whether to participate will not affect my future relations with Texas A&M University, in any way. I understand I am under no obligation to participate in the study. I may withdraw from the study at any time, if I wish to.

This research study has been reviewed and approved by the Institutional Review Board-Human Subjects in Research, Texas A&M University. If I have any research-related problems or questions regarding subjects' rights I may contact the Texas A&M Institutional Review Board through Dr. Michael W. Buckley, IRB Coordinator, Office of Vice President for Research at (979) 845-8585, mwbuckley@tamu.edu.

If at any time, I have any questions about this study or further information I would like to add, I may contact Kelly Wilson at the phone number or e-mail address below, or her advisor, Dr. B.E. Pruitt at (979) 845-3503 or buzz@hlkn.tamu.edu.

I also understand that by filling out the survey and returning it by mail, I am agreeing to participate in this study. I may keep this copy of the informed consent.

PRINCIPAL INVESTIGATOR:

SURVEY PARTICIPANT:

Kelly Wilson, M.Ed., CHES
Texas A&M University
Department of Health and Kinesiology
TAMU 4243
College Station, TX 77843-4243
Phone: (979) 845-3503
kellyw@hlkn.tamu.edu

DATE

APPENDIX G
RESULTS FROM THE PILOT STUDY

Results from the Pilot Study

A majority of junior high school principals in the pilot study agreed that reducing the number of unwanted pregnancies and sexually transmitted infections/diseases among youth were relative advantages of abstinence-only-until-marriage education. Principals also agreed that other advantages of abstinence-only-until-marriage education included increasing youths' self esteem, self efficacy, communication skills, decision-making skills, and leadership skills. The identified advantages of abstinence-only-until-marriage education were "extremely important" for over half of the respondents (Table P1).

Table P2 shows that the majority of the junior high school principals agreed that the (a)-(h) definition was consistent with their personal beliefs. Except for 3e, respondents were split between "strongly agree" and "agree" for the standard that sexual activity outside the context of marriage was likely to have harmful psychological and physical effects. Responses were also divided between "extremely important" and "important" with abstinence from sexual activity outside marriage should be the expected standard for all school-age children.

A majority of the respondents in the pilot study felt that the abstinence-only-until-marriage education was consistent with both their professional and personal beliefs. Although half of the respondents still "strongly agreed" with the professional standards and felt they were very important, there was more division between the "strongly agree" and "agree" or "extremely important" and "important" items. There were also more "disagree" and "not important" responses to the professional standards, compared with the personal standards.

Most of the principals felt that it was important to locate a variety of sources to implement abstinence-only-until-marriage education. However, over 30% of the respondents felt that it was "somewhat difficult" or "very difficult" to find resources, find funding, or acquire curricula to promote the abstinence message (Table P4).

Although the trialability scale was changed for the final instrument, the data still showed that 20% of the principals disagree that abstinence-only-until-marriage education could be incorporated into their schools' curricula. Even more disagreed that other types of sexuality education programs could be integrated into the curricula (Table P5). However, over half of the respondents felt that both of these issues were "important" or "extremely important."

Over one-third of the respondents disagreed that their colleagues, more so at the district level, were adopting abstinence-only-until-marriage education into their schools' curricula. However, many still felt that it was "important" to reflect on what other colleagues were accepting (Table P6). Table P7 shows that a few principals did purchase abstinence curricula and hire staff capable of promoting the abstinence message. In spite of this, many respondents, over half, were not likely to do these things. Some principals allowed state or federally funded programs to be offered in their schools; one-third indicated they were likely to allow the state or federally funded program presentation.

Table P1: Distribution of Responses for Relative Advantage

1. I believe one of the advantages of abstinence-only-until-marriage education is to...	Strongly Agree N/(%)	Agree N/(%)	Disagree N/(%)	Strongly Disagree N/(%)	I'm Not Sure N/(%)	Total N
a. Reduce the number of unwanted pregnancies among youth.	21 (53.8%)	17 (43.6%)	0 (0.0%)	0 (0%)	1 (2.6%)	39
b. Reduce the number of sexually transmitted infections/diseases among youth.	21 (55.3%)	15 (39.5%)	1 (2.6%)	0 (0%)	1 (2.6%)	38
c. Increase youth's self esteem.	12 (31.6%)	18 (47.4%)	2 (5.3%)	1 (2.6%)	5 (13.2%)	38
d. Increase youth's self efficacy.	9 (24.3%)	19 (51.4%)	2 (5.4%)	1 (2.7%)	6 (16.2%)	37
e. Increase youth's communication skills.	6 (16.2%)	16 (43.2%)	6 (16.2%)	2 (5.4%)	7 (18.9%)	37
f. Increase youth's decision- making skills.	13 (34.2%)	19 (50.0%)	1 (2.6%)	1 (2.6%)	4 (10.5%)	38
g. Increase youth's leadership skills.	8 (21.1%)	18 (47.4%)	6 (15.8%)	1 (2.6%)	5 (13.2%)	38
Cronbach's Alpha .8986						
2. How important is it for you to be able to...	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. Reduce the number of unwanted pregnancies among youth.	29 (72.5%)	11 (27.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	40
b. Reduce the number of sexually transmitted infections/diseases among youth.	32 (82.1%)	7 (17.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	39
c. Increase youth's self esteem.	24 (61.5%)	14 (35.9%)	1 (2.6%)	0 (0.0%)	0 (0.0%)	39
d. Increase youth's self efficacy.	22 (57.9%)	13 (34.2%)	1 (2.6%)	1 (2.6%)	1 (2.6%)	38
e. Increase youth's communication skills.	20 (51.3%)	18 (46.2%)	0 (0.0%)	1 (2.6%)	0 (0.0%)	39
f. Increase youth's decision- making skills.	30 (76.9%)	9 (23.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	39
g. Increase youth's leadership skills.	23 (59%)	15 (38.5%)	1 (2.6%)	0 (0.0%)	0 (0.0%)	39
Cronbach's Alpha .8767						
Cronbach's Alpha for 1&2 .8884						

Table P2: Distribution of Responses for Compatibility with Personal Standards						
3. How compatible is the following statement with your personal standards?	Strongly Agree N/(%)	Agree N/(%)	Disagree N/(%)	Strongly Disagree N/(%)	I'm Not Sure N/(%)	Total N
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	26 (65.0%)	10 (25.0%)	1 (2.5%)	0 (0.0%)	3 (7.5%)	40
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	25 (62.5%)	14 (35.0%)	1 (2.5%)	0 (0.0%)	0 (0.0%)	40
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	31 (77.5%)	5 (12.5%)	3 (7.5%)	0 (0.0%)	1 (2.5%)	40
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	28 (70.0%)	10 (25.0%)	2 (5.0%)	0 (0.0%)	0 (0.0%)	40
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	19 (47.5%)	19 (47.5%)	1 (2.5%)	0 (0.0%)	1 (2.5%)	40
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	22 (55.0%)	15 (37.5%)	0 (0.0%)	0 (0.0%)	3 (7.5%)	40
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	32 (80.0%)	8 (20%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	40
h. Attaining self-sufficiency before engaging in sexual activity is important.	24 (60.0%)	14 (35.0%)	0 (0.0%)	0 (0.0%)	2 (5.0%)	40
Cronbach's Alpha .7647						

Table P2: Distribution of Responses for Compatibility with Personal Standards

5. How important is it for the following statement to be consistent with your personal standards?	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	25 (62.5%)	13 (32.5%)	1 (2.5%)	1 (2.5%)	0 (0.0%)	40
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	23 (57.5%)	16 (40.0%)	0 (0.0%)	1 (2.5%)	0 (0.0%)	40
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	25 (62.5%)	11 (27.5%)	2 (5.0%)	1 (2.5%)	1 (2.5%)	40
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	23 (57.5%)	16 (40.0%)	0 (0.0%)	1 (2.5%)	0 (0.0%)	40
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	21 (53.8%)	16 (41.0%)	1 (2.6%)	1 (2.5%)	0 (0.0%)	39
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	26 (65.0%)	11 (27.5%)	0 (0.0%)	1 (2.5%)	2 (5.0%)	40
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	29 (72.5%)	10 (25.0%)	0 (0.0%)	1 (2.5%)	0 (0.0%)	40
h. Attaining self-sufficiency before engaging in sexual activity is important.	23 (57.5%)	14 (35.0%)	0 (0.0%)	1 (2.5%)	2 (5.0%)	40
Cronbach's Alpha .9034						
Cronbach's Alpha for 3&5 .8912						

Table P3: Distribution of Responses for Compatibility with Professional Standards						
4. How consistent is the following statement with your professional standards?	Strongly Agree N/(%)	Agree N/(%)	Disagree N/(%)	Strongly Disagree N/(%)	I'm Not Sure N/(%)	Total N
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	24 (60.0%)	14 (35.0%)	1 (2.5%)	0 (0.0%)	1 (2.5%)	40
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	25 (62.5%)	13 (32.5%)	0 (0.0%)	1 (2.5%)	1 (2.5%)	40
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	28 (70.0%)	9 (22.5%)	1 (2.5%)	1 (2.5%)	1 (2.5%)	40
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	23 (59.0%)	14 (35.9%)	1 (2.5%)	1 (2.5%)	0 (0.0%)	39
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	19 (47.5%)	21 (52.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	40
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	24 (60.0%)	14 (35.0%)	1 (2.5%)	0 (0.0%)	1 (2.5%)	40
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	29 (72.5%)	11 (27.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	40
h. Attaining self-sufficiency before engaging in sexual activity is important.	23 (57.5%)	15 (37.5%)	0 (0.0%)	0 (0.0%)	2 (5.0%)	40
Cronbach's Alpha .8154						

Table P3: Distribution of Responses for Compatibility with Professional Standards

6. How important is it for the following statement to be consistent with your professional standards?	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. Social, psychological, and health gains are realized when youth abstain from sexual activity.	21 (53.8%)	16 (41.0%)	1 (2.5%)	1 (2.5%)	0 (0.0%)	39
b. Abstinence from sexual activity outside marriage should be the expected standard for all school age children.	21 (53.8%)	15 (38.5%)	2 (5.1%)	1 (2.5%)	0 (0.0%)	39
c. Abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems.	22 (56.4%)	14 (35.9%)	1 (2.6%)	1 (2.6%)	1 (2.6%)	39
d. A mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.	21 (53.8%)	15 (38.5%)	2 (5.1%)	1 (2.6%)	0 (0.0%)	39
e. Sexual activity outside the context of marriage is likely to have harmful psychological and physical effects.	20 (52.6%)	16 (42.1%)	0 (0.0%)	1 (2.6%)	1 (2.6%)	38
f. Bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.	21 (53.8%)	14 (35.9%)	1 (2.6%)	1 (2.6%)	2 (5.1%)	39
g. Young people should reject sexual advances and know how alcohol and drug use increases vulnerability to sexual advances.	25 (64.1%)	13 (33.3%)	0 (0.0%)	1 (2.6%)	0 (0.0%)	39
h. Attaining self-sufficiency before engaging in sexual activity is important.	21 (53.8%)	16 (41.0%)	0 (0.0%)	1 (2.6%)	1 (2.6%)	39
Cronbach's Alpha .9465						
Cronbach's Alpha for 4&6 .9445						

Table P4: Distribution of Responses for Complexity

7. How easy or difficult is it for you to...	Very Easy N/(%)	Somewhat Easy N/(%)	Somewhat Difficult N/(%)	Very Difficult N/(%)	I'm Not Sure N/(%)	Total N
a. Find resources to deliver the abstinence-only-until-marriage education message?	8 (20.0%)	11 (27.5%)	9 (22.5%)	4 (10.0%)	8 (20.0%)	40
b. Find funding to support the abstinence-only-until-marriage message?	4 (10.3%)	8 (20.5%)	10 (25.6%)	7 (17.9%)	10 (25.6%)	39
c. Acquire curriculum to teach abstinence-only-until-marriage education?	7 (17.5%)	11 (27.5%)	10 (25.0%)	4 (10.0%)	8 (20.0%)	40
d. Find people skilled and capable of promoting the abstinence-only-until-marriage message?	10 (25.0%)	10 (25.0%)	9 (22.5%)	5 (12.5%)	6 (15.0%)	40
e. Understand policies regarding abstinence-only-until-marriage education?	11 (27.5%)	14 (35.0%)	7 (17.5%)	2 (5.0%)	6 (15.0%)	40
Cronbach's Alpha .9172						
8. How important is it for you to be able to...	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. Find resources to deliver the abstinence-only-until-marriage education message?	15 (38.5%)	19 (48.7%)	3 (7.7%)	1 (2.6%)	1 (2.6%)	39
b. Find funding to support the abstinence-only-until-marriage message?	13 (33.3%)	19 (48.7%)	4 (10.3%)	1 (2.6%)	2 (5.1%)	39
c. Acquire curriculum to teach abstinence-only-until-marriage education?	16 (41.0%)	16 (41.0%)	4 (10.3%)	1 (2.6%)	2 (5.1%)	39
d. Find people skilled and capable of promoting the abstinence-only-until-marriage message?	17 (43.6%)	18 (46.2%)	2 (5.1%)	1 (2.6%)	1 (2.6%)	39
e. Understand policies regarding abstinence-only-until-marriage education?	18 (46.2%)	18 (46.2%)	1 (2.6%)	0 (0.0%)	2 (5.1%)	39
Cronbach's Alpha .9571						
Cronbach's Alpha for 7&8 .9210						

Table P5: Distribution of Responses for Trialability						
9. How much do you agree with the following...	Strongly Agree N/(%)	Agree N/(%)	Disagree N/(%)	Strongly Disagree N/(%)	I'm Not Sure N/(%)	Total N
a. Abstinence-only-until-marriage education can easily be incorporated into your school's curriculum.*	8 (20.0%)	15 (37.5%)	8 (20.0%)	1 (2.5%)	8 (20.0%)	40
b. Sexuality education programs, other than abstinence-only-until-marriage programs, can easily be incorporated into your school's curriculum.*	2 (5.0%)	11 (27.5%)	14 (35.0%)	4 (10.0%)	9 (22.5%)	40
Cronbach's Alpha .5997						
10. How important is it that...	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. Abstinence-only-until-marriage education can easily be incorporated into your school's curriculum.*	10 (25.6%)	23 (59.0%)	2 (5.1%)	1 (2.6%)	3 (7.7%)	39
b. Sexuality education programs, other than abstinence-only-until-marriage programs, can easily be incorporated into your school's curriculum.*	5 (12.8%)	16 (41.0%)	10 (25.6%)	3 (7.7%)	5 (12.8%)	39
Cronbach's Alpha .6601						
Cronbach's Alpha for 9&10 .7364						
*candidate for change on final instrument						

Table P6: Distribution of Responses for Observability

11. How much do you agree with the following...	Strongly Agree N/(%)	Agree N/(%)	Disagree N/(%)	Strongly Disagree N/(%)	I'm Not Sure N/(%)	Total N
a. I have seen or heard of other principals in my district adopting abstinence-only-until-marriage education into their school's curriculum.	7 (17.5%)	4 (10.0%)	17 (42.5%)	3 (7.5%)	9 (22.5%)	40
b. I have seen or heard of other principals in my region adopting abstinence-only-until-marriage education into their school's curriculum.	6 (15.0%)	8 (20.0%)	14 (35.0%)	3 (7.5%)	9 (22.5%)	40
c. I have seen or heard of other principals across Texas adopting abstinence-only-until-marriage education into their school's curriculum.	4 (10.0%)	9 (22.5%)	16 (40.0%)	3 (7.5%)	8 (20.0%)	40
d. I have seen or heard of other principals across the nation adopting abstinence-only-until-marriage education into their school's curriculum.	4 (10.0%)	10 (25.0%)	13 (32.5%)	4 (10.0%)	9 (22.5%)	40
Cronbach's Alpha .9433						
12. Before you consider adopting abstinence-only-until-marriage education, how important is the following...	Extremely Important N/(%)	Important N/(%)	Not Very Important N/(%)	Not Important At All N/(%)	I'm Not Sure N/(%)	Total N
a. I have seen or heard of other principals in my district adopting abstinence-only-until-marriage education into their school's curriculum.	7 (17.5%)	16 (40.0%)	8 (20.0%)	5 (12.5%)	4 (10.0%)	40
b. I have seen or heard of other principals in my region adopting abstinence-only-until-marriage education into their school's curriculum.	7 (17.5%)	16 (40.0%)	8 (20.0%)	5 (12.5%)	4 (10.0%)	40
c. I have seen or heard of other principals across Texas adopting abstinence-only-until-marriage education into their school's curriculum.	7 (17.5%)	16 (40.0%)	8 (20.0%)	5 (12.5%)	4 (10.0%)	40
d. I have seen or heard of other principals across the nation adopting abstinence-only-until-marriage education into their school's curriculum.	6 (15.4%)	14 (35.9%)	11 (28.2%)	5 (12.8%)	3 (7.7%)	39
Cronbach's Alpha .9956						
Cronbach's Alpha for 11&12 .8838						

Table P7: Distribution of Responses for Likelihood of Adoption

13. How likely are you to...	Extremely Likely N/(%)	Somewhat Likely N/(%)	Not Likely N/(%)	Not Likely At All N/(%)	I Already Do N/(%)	Total N
a. Apply for a grant to fund abstinence-only-until-marriage education in your school.	0 (0.0)	20 (50.0)	13 (32.5)	7 (17.5)	0 (0.0)	40
b. Purchase curricula to teach abstinence-only-until-marriage education <i>with</i> grant funding.	6 (15.0)	17 (42.5)	9 (22.5)	8 (20.0)	0 (0.0)	40
c. Purchase curricula to teach abstinence-only-until-marriage education <i>without</i> grant funding.	2 (5.0)	8 (20.0)	20 (50.0)	8 (20.0)	2 (5.0)	40
d. Hire staff/teachers skilled and capable of promoting the abstinence-only-until-marriage message <i>with</i> grant funding.	6 (15.0)	13 (32.5)	14 (35.0)	6 (15.0)	1 (2.5)	40
e. Hire staff/teachers skilled and capable of promoting the abstinence-only-until-marriage message <i>without</i> grant funding.**	3 (7.5)	6 (15.0)	18 (45.0)	10 (25.0)	3 (7.5)	40
f. Allow a state or federally funded abstinence-only-until-marriage education program be presented in your school.	16 (43.2)	15 (40.5)	4 (10.8)	1 (2.7)	1 (2.7)	37
g. Allow a faith based abstinence-only-until-marriage education program be presented in your school.**	4 (11.1)	8 (22.2)	17 (47.2)	7 (19.4)	0 (0.0)	36

Cronbach's Alpha .8355

**13f and 13g's location on the survey was moved due to the lower N

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PROFESSIONAL EXPERIENCE

2003-2004	Program Coordinator - Abstinence Education Evaluation	<i>Texas A&M University Department of Health and Kinesiology</i>
2003	Graduate Teaching Assistant	<i>Texas A&M University Department of Health and Kinesiology</i>
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1999-2000	Teacher	<i>Austin Independent School District Covington Middle School</i>

PUBLICATIONS

Goodson, P., Suther, S., Pruitt, B.E., Wilson, K.L. (2003). Defining abstinence: views of directors, instructors, and participants in abstinence-only-until-marriage programs in Texas. *Journal of School Health*, 73(3), 91-96.

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